

Topic 1 - Quantitative Comparison

Question #1

Topic 1

Column A

$$2 \square 2$$

$$a \square b = (a + b)(a - b)$$

Column B

$$-2 \square -2$$

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion

Question #2

Topic 1

Column A

$$\sqrt[3]{x}$$

$$0 < x < 1$$

Column B

$$\sqrt{x}$$

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion

Question #3

Topic 1

Column A

The circumference of circle O

Column B

Line segments AB and CD are chords of circle O.

The length of AB plus twice the length of CD

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion

Question #4

Topic 1

Column A

The amount of interest earned on \$1,000 after four months

Column B

The amount of interest earned on \$2,000 after eight months

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion

Question #5

Topic 1

Column A

Column B

The number of prime numbers between 10 and 15

The number of prime factors of 33

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion

Question #6

Topic 1

Column A

Column B

The 25th term of Set R

$$n = 2$$
$$\text{Set R: } \{n + 1, 2n + 2, 3n + 3, \dots\}$$
$$\text{Set S: } \{n, n + 1, n + 2, \dots\}$$

Two times the 24th term of Set S

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion

Question #7

Topic 1

Column A
(9,300s) (.0093t)

Column B
(9.3s) (9.3t)

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion

Question #8

Topic 1

A farmer wants to fence a rectangular horse corral with an area of 12,000 square feet. Fence posts along each side will be 10 feet apart at their center.

Column A
The fewest possible posts that could be used to construct the fence

Column B
The number of posts used if two of the sides are 300 feet in length each

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion

Question #9

Topic 1

Column A

Column B

$$(x + 2)(x - 2)$$

$$x^2 - 2$$

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

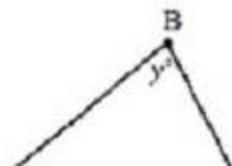
[Reveal Solution](#)[Discussion](#) **1****Question #10***Topic 1***Column A**

The price of a \$100 product marked up by Q percent

Column B

The price of a \$99 product marked up by Q dollars

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

[Reveal Solution](#)[Discussion](#)**Question #11***Topic 1***Column A****Column B**

$x^\circ + y^\circ$



z°

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

[Reveal Solution](#)[Discussion](#)**Question #12***Topic 1***Column A**

$p + q$

$p > 0 > q$

Column B

pq

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

[Reveal Solution](#)[Discussion](#) 2**Question #13***Topic 1***Column A****Column B**

Distribution D = {3,6,9,10}

The range of D

The median
of D

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion

Question #14

Topic 1

Column A

$$x^3 - x^2$$

$$x < -1$$

Column B

$$x^2 - x$$

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion

Question #15

Topic 1

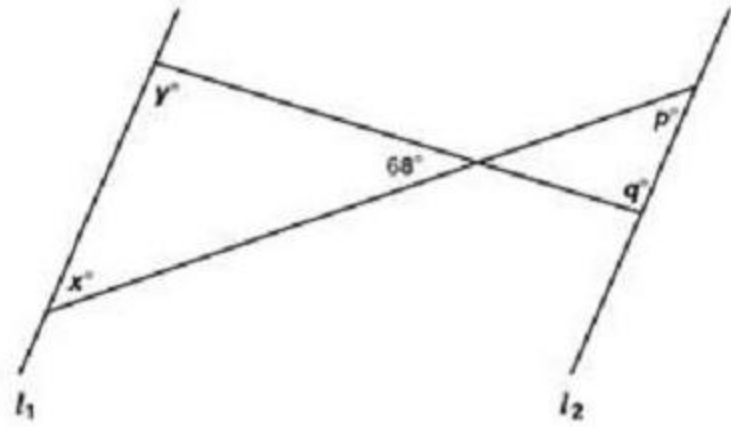
Column A

P is a positive integer.

Column B

The remainder when $7P + 8$ is divided by 7

The remainder when $3P + 5$ is divided by 3



- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion

Question #16

Topic 1

Column A

$$x - y$$

$$l1 \parallel l2$$

Column B

$$q - p$$

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion

1

Question #17

Topic 1

Column A

$a + b$

$0 < a < 1$

$0 < b < 1$

Column B

$a^2 + b^2$

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

[Reveal Solution](#)[Discussion](#) **1**

Question #18

Topic 1

Column A

The lowest possible value of p if the cost of p cans of soda is greater than the cost of a case of soda.

Column B

15

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

[Reveal Solution](#)[Discussion](#)

A rectangular ribbon of paper is looped to form a circular ring having a diameter that measures twice the rings height.

Column A

Column B

The surface area of the outside of the ring

Twice the circular area of the ring, measured to the paper's outer surface

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion 2

Column A

Column B

The average (arithmetic mean) of x and y

The average (arithmetic mean) of $x - 1$ and $y + 1$

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion

Question #21

Topic 1

Three movie patrons of differing heights are standing in line, one behind the other, to purchase tickets for the movie.

Column A

Column B

The probability that the three patrons are lined up in order from shortest to tallest

The probability that the first patron in line is neither the tallest nor the shortest of the three patrons

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion

Question #22

Topic 1

A buyer pays a \$1.00 tax on an item that costs \$10.00 after the tax is added.

Column A

Column B

The percentage rate of the tax

11%

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion

Column A

3^{26}

Column B

9^{13}

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

[Reveal Solution](#)[Discussion](#)

Column A

$3 \text{ less than } \frac{n}{2}$

Five more than twice the number n is 17.

Column B

$2 \text{ less than } \frac{n}{3}$

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

[Reveal Solution](#)[Discussion](#)

Column A	$0 < p < q$	Column B
The Ratio of p to $(p + 1)$		The Ratio of q to $(q + 1)$

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

[Reveal Solution](#)
[Discussion](#)

Question #26 Topic 1

Distribution P is given as $\{-2, 1, x\}$, where x is the median. Distribution Q is given as $\{x, 0, 3\}$, where x is the median.

Column A	Column B
The standard deviation of Distribution P	The standard deviation of Distribution Q

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

[Reveal Solution](#)
[Discussion](#)

Question #27 Topic 1

Column A	Column B
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$\frac{a^2 + b^2}{ab}$	$\frac{a}{b} + \frac{b}{a}$
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- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion

Question #28

Topic 1

Column A

Column B

$$\langle u \rangle = u^2 - u$$

U is a non-zero number.

$$2 \langle u \rangle$$

$$\langle 2u \rangle$$

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion 2

Question #29

Topic 1

The toll for driving on road A is \$1.20 for the first mile and 35 cents for each additional mile. The toll for driving on road B is \$2.25 for the first mile and 20 cents for each additional mile.

Column A

Column B

The toll for a 8-mile drive on road A

The toll for a 8-mile drive on road B

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.1

Reveal Solution

Discussion 1

Question #30

Topic 1

Column A

$$k^{1/2} + k^{1/2}$$

$$k > 0$$

Column B

$$\sqrt{k}$$

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion

Question #31

Topic 1

In a group of 18 students taking Spanish and German, 12 are taking Spanish, and 4 are taking both Spanish and German.

Column A

Column B

The number taking German but not Spanish

The number taking Spanish but not German

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion

Question #32

Topic 1

If n is the first of two consecutive odd integers, and if the difference of their squares is 120, which of the following equations can be used to find their values?

- A. $(n + 1)^2 - n^2 = 120$
- B. $n^2 - (n + 2)^2 = 120$
- C. $[(n + 2) - n]^2 = 120$
- D. $n^2 - (n + 1)^2 = 120$
- E. $(n + 2)^2 - n^2 = 120$

- A. Option A
- B. Option B
- C. Option C
- D. Option D
- E. Option E

Reveal Solution

Discussion

Question #33

Topic 1

Column A

The least common multiple of
4, 6, and 8

Column B

The greatest common factor of
44, 66, and 88

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion

Question #34

Topic 1

Ps age is twice Qs age. One year ago, Rs age was exactly half of Ps age at that time.

Column A

Column B

R's age

Q's age

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion 2

Question #35

Topic 1

Column A

Column B

$$\frac{b}{a}$$

$$ab < 0$$

$$a < b$$

$$\frac{a}{b}$$

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given. D

Reveal Solution

Discussion 2

Question #36

Topic 1

Column A

The standard deviation of a distribution of two numbers having a range of 2.

Column B

The standard deviation of a distribution of three numbers having a range of 2.

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion

Question #37

Topic 1

Column A

The sum of all integers from 19 to 50, including 19 and 50

Column B

The sum of all integers from 21 to 51, including 21 and 51

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;

- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion

Question #38

Topic 1

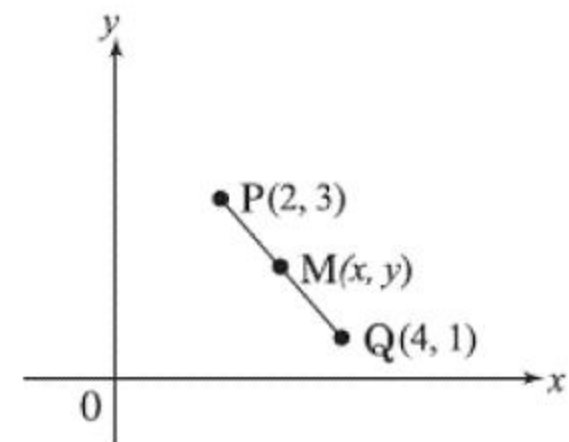
Column A

Column B

x

y

M is the midpoint of PQ.



M is the midpoint of PQ

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion

Question #39

Topic 1

Column A

Column B

The number of fifths in eight sixteenths

The number of fifteenths in one sixth

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion

Question #40

Topic 1

Column A

Column B

The distance wheel A travels per hour

The distance wheel B travels per minute

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion

← Previous Questions

Next Questions →

Question #41

Topic 1

Column A

 x

$$3x - 3 - 4x = x - 7 - 2x + 4$$

Column B

 0

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion 1

Question #42

Topic 1

Column A

The price of a coat on sale at 7% off its list price of \$300

Column B

The price of a coat that cost \$200 wholesale sold at a 40% markup

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion

Question #43

Topic 1

Column A

1.25

$$y = \frac{1}{2}$$

Column B

$$y^0 + y^2$$

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion

Question #44

Topic 1

$$\frac{1}{3}$$
$$\frac{1}{5}$$
$$\frac{8}{15}$$

Of 60 horses in a stable,
are black,
are white, and
are stallions.

Column A

The minimum number of stallions of a color other than black or white.

Column B

The minimum number of stallions that are either black or white.

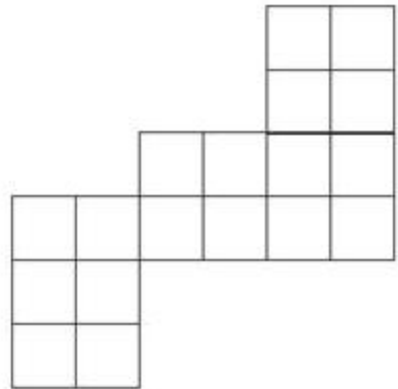
- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

[Reveal Solution](#)[Discussion](#)

Question #45

Topic 1

The small squares that form the 10-sided quilt shown above are to be rearranged to form a rectangular quilt consisting of two rows of small squares.



Column A

The perimeter of the quilt as shown above

Column B

The perimeter of the quilt after the squares are rearranged

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

[Reveal Solution](#)[Discussion](#)

Question #46

Topic 1

The center of Agua Island is 24 miles from the center of Breezy Island and 48 miles from the center of Cocoa Island.

Column A

The distance from the center of Breezy Island to the center of Cocoa Island

Column B

Twice the distance from the center of Breezy Island to the center of Agua Island

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

[Reveal Solution](#)[Discussion](#)

Question #47

Topic 1

Column A

$$2\sqrt{x} \times 3\sqrt{5}$$

Column B

$$6\sqrt{5x}$$

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

[Reveal Solution](#)[Discussion](#)

Question #48

Topic 1

Column A

The number of different ways to add four positive odd integers together for a sum of 10, without considering the sequence of addition

Column B

The number of different ways add three positive even integers together for a sum of 10, without considering the sequence of addition

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;

- D. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion

Question #49

Topic 1

Column A

The sum of five consecutive integers whose median is zero (0)

Column B

The sum of six consecutive odd integers whose median is zero (0)

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion

Question #50

Topic 1

Column A

Hanna's average speed during her round trip between home and work.

Column B

Hanna's average speed during her trip from home to work.

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion 1

Question #51

Topic 1

Column A

The greatest common factor
of 20, 45, and 90

Column B

The sum of $\frac{3}{5}$, $\frac{5}{3}$, and 5

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion

Question #52

Topic 1

Column A

$50 \div 3.9x$

Column B

$.13x \times 0.6$

$x > 0$

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion

Column A

$P + Q$

$P > 0$

Column B

$|P + Q|$

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

[Reveal Solution](#)[Discussion](#)

Column A

The greatest number of
1-inch cubes that can be
packed into a box
measuring $5 \times 6 \times 8$ inches

Column B

The greatest number of
2-inch cubes that can be
packed into a box
measuring $10 \times 12 \times 16$ inches

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

[Reveal Solution](#)[Discussion](#)

Column A

$$\frac{1}{x} + \frac{1}{x}$$

$$x > 0$$

Column B

$$\frac{1}{2x}$$

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given. A

[Reveal Solution](#)[Discussion](#) **1**

Column A

$$\frac{x^8}{x^2}$$

$$x \neq 0$$

Column B

$$(x)(x^2)(x^3)$$

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

[Reveal Solution](#)[Discussion](#) **1**

Column A

Column B

The greatest prime factor of 99

The greatest prime factor of 39

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion

Question #58

Topic 1

Column A

Column B

Horse Q weighs 15 percent more than horse P.
Horse R weighs 150 pounds more than horse P.

The weight of horse R

The weight of horse Q

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given. D

Reveal Solution

Discussion

Question #59

Topic 1

Column A

Column B

Apples cost \$7 per bag of 25.

Pears cost 52¢ per bag of 100.
At the average price of an individual piece of fruit, the total price of 178 apples and 461 pears

At the average price of an individual piece of fruit, the total price of 461 apples and 178 pears

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion

Question #60

Topic 1

Column A

Column B

$p, q,$ and r are positive integers such that $p < q < r < 5$.

$p + q + r$

qr

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion

← Previous Questions

Next Questions →

Question #61

Topic 1

Column A

Column B

A pail holds 1.5 gallons of water.

The number of pails of water needed
to fill a 30-gallon fish tankThe number of gallons of water
needed to fill a fish tank of a 20-pail
capacity

- A. The quantity in Column A is greater;
 B. The quantity in Column B is greater;
 C. The quantities are equal;
 D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion

Question #62

Topic 1

Column A

Column B

 $2 \diamond -1$

$$A \diamond b = \frac{a - b}{a - b}$$

 $-2 \diamond 4$

- A. The quantity in Column A is greater;
 B. The quantity in Column B is greater;
 C. The quantities are equal;
 D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion 1

Column A

Column B

$$y^2 + y - 6 = 0$$

2

2

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

[Reveal Solution](#)[Discussion](#)

Column A

Column B

The perimeter of a triangle with vertices (0,1), (4,1), and (4,4) on the xy -plane

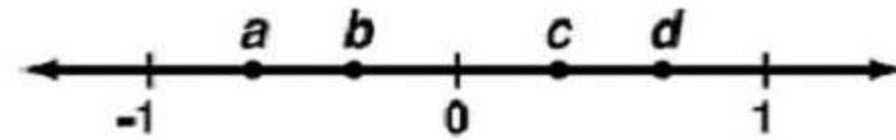
The perimeter of a triangle with vertices (2,0), (5,0), and (5,3) on the xy -plane

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

[Reveal Solution](#)[Discussion](#)

Column A

Column B

 ad bc 

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

[Reveal Solution](#)[Discussion](#)

Column A

Column B

$$\frac{8}{17} + \frac{9}{14}$$

$$\frac{7}{16} + \frac{8}{13}$$

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

[Reveal Solution](#)[Discussion](#)

Question #67

Topic 1

Column A

Column B

The longest side of the triangle

The circle's diameter

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

[Reveal Solution](#)[Discussion](#)

Question #68

Topic 1

Column A

Column B

$$xy \neq 0$$

$$\sqrt[3]{8x^6y^6}$$

$$\sqrt{4(xy)^4}$$

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

[Reveal Solution](#)[Discussion](#) **1**

The total weight of m bricks, all of which are equal in weight, is n pounds.

Column A

$$\frac{n}{m}$$

Column B

1

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion

Column A

$$9a + 3b$$

$a, b, c,$ and d
are positive

$$\frac{a}{2} + \frac{b}{6} = \frac{c}{3} + \frac{d}{9}$$

Column B

$$6c + 3d$$

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion 1

Column A

Column B

$$k = 1 + \frac{1}{2} + \frac{1}{4} + \frac{1}{8} + \frac{1}{16} + \frac{1}{32} + \frac{1}{64} + \frac{1}{128}$$

k

2

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion

Question #72

Topic 1

Column A

Column B

$$n = 1 + \frac{1}{2} + \frac{1}{3} + \frac{1}{4} + \frac{1}{5} + \frac{1}{6} + \frac{1}{7}$$

n

3

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion

Question #73

Topic 1

Column A

$$\frac{x^{2k}}{x^4}$$

Column B

$$x^{\frac{k}{2}}$$

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion

Question #74

Topic 1

Column A

$$(\sqrt{3})^{20}$$

Column B

$$(\sqrt[3]{9})^{15}$$

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

Reveal Solution

Discussion

Question #75

Topic 1

Column A

$$x < 0$$

Column B

$xy(x+z)$

$y < 1$

$x^2 + xyz$

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

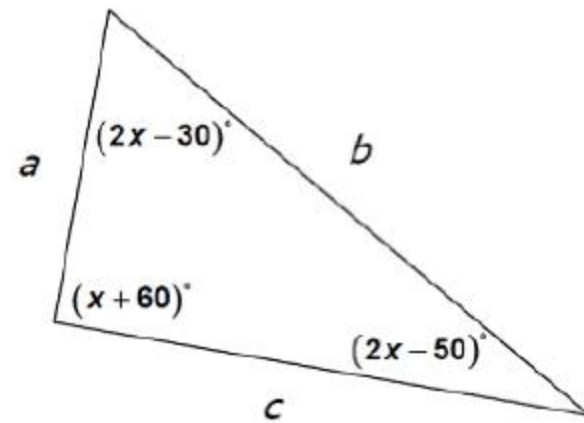
[Reveal Solution](#)[Discussion](#) **1**

Question #76

Topic 1

Column A

Column B



$a^2 + c^2$

b^2

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

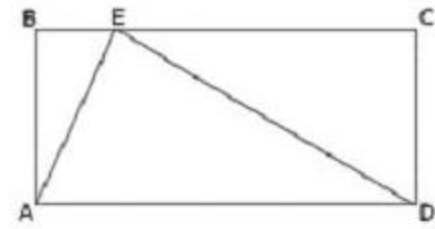
[Reveal Solution](#)[Discussion](#)

Question #77

Topic 1

Column A

Column B



Area of triangle AED

Area of triangle AED
+
Area of triangle ECD

- A. The quantity in Column A is greater;
- B. The quantity in Column B is greater;
- C. The quantities are equal;
- D. The relationship cannot be determined from the information given.

[Reveal Solution](#)[Discussion](#)

Topic 2 - Problem Solving

Question #1

Topic 2

If $X > 0$ and if $X + 3$ is a multiple of 3, which of the following is NOT a multiple of 3?

- A. X
- B. $X + 6$
- C. $2X + 6$
- D. $3X + 5$
- E. $+ 18$

[Reveal Solution](#)[Discussion](#)

Question #2

Topic 2

If $m = n$ and $p < q$, then which of the following inequalities holds true in all cases?

- A. $m - p > n - q$
- B. $p - m > q - n$
- C. $m - p < n - q$
- D. $mp > nq$
- E. $m + q < n + p$

- A. Option A
- B. Option B
- C. Option C
- D. Option D
- E. Option E

Reveal Solution

Discussion

Question #3

Topic 2

On the plane, what is the slope of a line that is perpendicular to the line defined by the equation

$$3y = \frac{1}{2}x + 3?$$

- A. -6
- B. -2
- C. -
- D. 2
- E. 3

Reveal Solution

Discussion

← Previous Questions

Next Questions →

Question #4

Topic 2

Fifteen buoys, numbered 1 to 15, are positioned equidistantly along a straight path for a sailboat race. The race begins at buoy 1, and 45 minutes into the race the fastest boat reaches buoy 10. At the same average speed, how many minutes will it take the boat to race from buoy 10 to buoy 15?

- A. 45
- B. 32.5
- C. 25
- D. 22.5
- E. 15

Reveal Solution

Discussion

Question #5

Topic 2

SIMULATION -

Cynthia drove for seven hours at an average rate of 50 miles per hour (mph) and for one hour at an average rate of 60 mph. What was her average rate for the entire trip?

_____ miles per hour

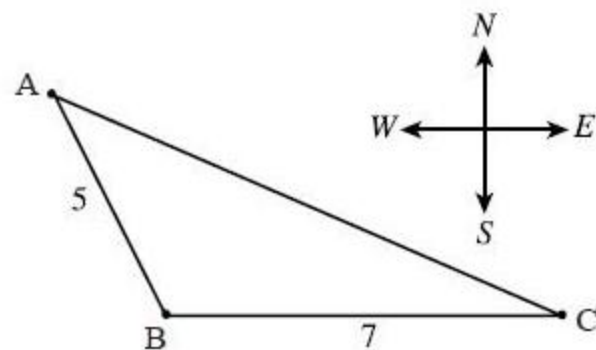
Express your answer as a decimal number to the nearest two places right of the decimal point.

Reveal Solution

Discussion

Question #6

Topic 2



Once a month, a crop duster sprays a triangular area defined by three farm houses: A, B, and C, as indicated in the figure. Farmhouse C is located 7 kilometers due east of farmhouse B, as shown. If farmhouse A is located 10 kilometers further west than farmhouse C, what is the total area that the crop duster sprays?

- A. 12.5 km²
- B. 14 km²
- C. 15 km²
- D. 15.5 km²
- E. 17.5 km²

Reveal Solution

Discussion

Question #7

Topic 2

The arithmetic mean (average) of two numbers is P . If the first number is Q , which of the following Expressions represents the other number?

- A. $2PQ - Q$
- B. $PQ - 2Q$
- C. $2PQ - P$
- D. P
- E. $PQ - Q$

- A. Option A
- B. Option B
- C. Option C
- D. Options D
- E. Option E

Reveal Solution

Discussion 1

Question #8

Topic 2

How many ounces of soy sauce must be added to an 18-ounce mixture of peanut sauce and soy sauce consisting of 32% peanut sauce in order to create a mixture that is 12% peanut sauce?

- A. 21
- B. $24\frac{3}{4}$
- C. $26\frac{2}{3}$
- D. 30
- E. $38\frac{2}{5}$

- A. Option A
- B. Option B
- C. Option C
- D. Option D
- E. Option E

Reveal Solution

Discussion

Question #9

Topic 2

At a particular ice cream parlor, customers can choose among five different ice cream flavors and may choose either a sugar cone or a waffle cone. Considering ice cream flavor and cone type, but NOT the arrangement of ice cream scoops, how many distinct triple-scoop cones with three different ice cream flavors are available?

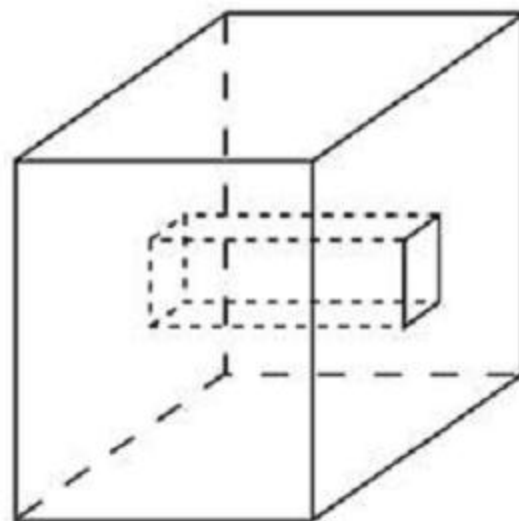
- A. 10
- B. 20
- C. 25
- D. 40
- E. 50

Reveal Solution

Discussion

Question #10

Topic 2



The figure above shows a solid cube 3 inches on a side but with a 1-inch square hole cut through it. How many square inches is the total surface area of the resulting

solid figure?

- A. 24
- B. 42
- C. 52
- D. 64
- E. 66

Reveal Solution

Discussion

Question #11

Topic 2

If $x + y = a$, and if $x - y = b$, then $x =$

- A. $\frac{1}{2}(a - b)$
- B. $(a + b)$
- C. $(a - b)$
- D. $\frac{1}{2}(ab)$
- E. $\frac{1}{2}(a + b)$

- A. Option A
- B. Option B
- C. Option C
- D. Option D
- E. Option E

Reveal Solution

Discussion

Question #12

Topic 2

If one dollar can buy m pieces of paper, how many dollars are needed to buy p reams of paper? [1 ream = 500 pieces of paper.]

- A. $\frac{500p}{m}$
- B. $\frac{500p}{m}$
- C. $\frac{500}{p+m}$

- D. $\frac{p}{500m}$
E. $500m(p - m)$

- A. Option A
B. Option B
C. Option C
D. Option D
E. Option E

Reveal Solution

Discussion

Question #13

Topic 2

$$\frac{a}{b} \cdot \frac{b}{c} \cdot \frac{c}{d} \cdot \frac{d}{e} \cdot x = 1,$$

If,

then $X =$

- A. $\frac{a}{e}$
B. $\frac{be}{a}$
C. e
D. $\frac{1}{a}$
E. $\frac{e}{a}$

- A. Option A
B. Option B
C. Option C
D. Option D
E. Option E

Reveal Solution

Discussion

Question #14

Topic 2

Temperature (F°)	Number of Days in April (Low Daily Temperature)	Number of Days in April (High Daily Temperature)
41°–45°	14	3
46°–50°	12	9
51° and above	4	18

The table shows the distribution of daily low and daily high temperatures in a certain location during each of the 30 days in April. Recorded low and high temperatures were rounded to the nearest Fahrenheit degree (F). What was the range of daily high temperatures during the month of April?

- A. 10 degrees
- B. 14 degrees
- C. 15 degrees
- D. 51 degrees
- E. It cannot be determined from the information given.

[Reveal Solution](#)

[Discussion](#)

Question #15

Topic 2

Kirk sent \$54 to the newspaper dealer for whom he delivers papers, after deducting a 10% commission for himself. If newspapers sell for 40 cents each, how many papers did Kirk deliver?

- A. 150
- B. 210
- C. 240
- D. 320
- E. 610

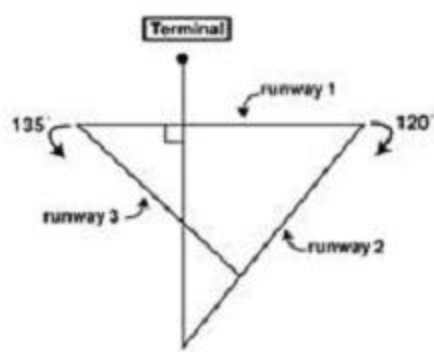
[Reveal Solution](#)

[Discussion](#)

Question #16

Topic 2

As shown in the figure, from runway 1 airplanes must turn 120 to the right onto runway 2 or 135 to the left onto runway 3. Which of the following indicate(s) a complete turn from one runway to another?



I. 45 -

II. 85 -

III. 105 -

- A. II only
- B. III only
- C. I and III only
- D. II and III only
- E. I, II, and III

Reveal Solution

Discussion

Question #17

Topic 2

In a geometric sequence, each term is a constant multiple of the preceding one. If the first three terms in a geometric sequence are 22, x , and 28, which of the following could be the sixth term in the sequence?

- A. 512
- B. 256
- C. 64
- D. -17
- E. -128

Reveal Solution

Discussion 1

Question #18

Topic 2

SIMULATION -

A certain line on the xy -plane contains the (x, y) points $(-2, 1)$ and $(3, 5)$. What is the slope of the line?

Express your answer as a simple fraction. To indicate a negative fraction, enter a dash (minus sign) before either the numerator number or the denominator number.

[Reveal Solution](#)[Discussion](#)

M college students agree to rent an apartment for D dollars per month, sharing the rent equally. If the rent is increased by \$100, what amount must each student contribute?

A. $\frac{M+100}{D}$

B. $\frac{D}{M} + 100$

C. $\frac{D}{M}$

D. $\frac{M}{D+100}$

E. $\frac{D+100}{M}$

A. Option A

B. Option B

C. Option C

D. Option D

E. Option E

[Reveal Solution](#)[Discussion](#)



In the figure above, the centers of all three circles lie on the same line. The radius of the middle-sized circle is twice that of the smallest circle. If the radius of the smallest circle is 1, what is the length of the boundary of the shaded region?

- A. 12π
- B. 6π
- C. 12
- D. 3π
- E. 9

- A. Option A
- B. Option B
- C. Option C
- D. Option D
- E. Option E B

Reveal Solution

Discussion

Question #21

Topic 2

Among registered voters in a certain district, the ratio of male to female voters is 3:5. If the district currently includes 2,400 registered voters, how many additional males must register to make the ratio 4:5, assuming the number of female voters remains unchanged?

- A. 120
- B. 150
- C. 240
- D. 300
- E. 360

Reveal Solution

Discussion

Question #22

Topic 2

A faucet is dripping at a constant rate. By noon on Sunday, 3 ounces of water have dripped from the faucet into a holding cup. If a total of 7 ounces have dripped into the cup as of 5 p.m. the same day, how many ounces altogether will have dripped into the tank by 2:00 a.m. the following day?

- A. 10
- B. $5\frac{1}{5}$
- C. 12
- D. $7\frac{1}{5}$
- E. $8\frac{1}{5}$

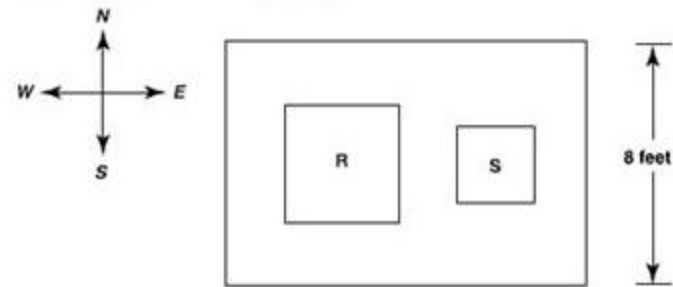
Reveal Solution

Discussion

Question #23

Topic 2

Two square rugs R and S, which have a combined area of 20 square feet, are placed on a rectangular floor whose area is 112 square feet, as shown above. Measured east to west, each rug is placed the same distance from the other rug as from the nearest east or west edge of the floor. If the area of rug R is four times the area of rug S, how far apart are the rugs?



- A. 3 feet, 4 inches
- B. 3 feet
- C. 2 feet, 8 inches
- D. 2 feet
- E. 1 feet, 6 inches

Reveal Solution

Discussion

← Previous Questions

Next Questions →

Question #24

Topic 2

SIMULATION -

Shown below is a correct problem in addition, with R and S representing different digits.

7R

RS -

RR -

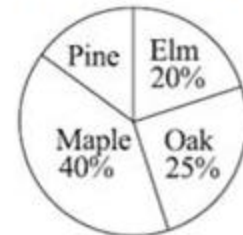
What is the value of S?

[Reveal Solution](#)[Discussion](#) 1

Question #25

Topic 2

The chart shows the portions of all four types of trees on Main Street. If there are 140 trees altogether on Main Street, how many of the trees are pine?



TREES ON MAIN STREET

- A. 40
- B. 24
- C. 21
- D. 15
- E. 14

[Reveal Solution](#)[Discussion](#)

Question #26

Topic 2

A spinner containing seven equal regions numbered 1 through 7 is spun two times in a row. What is the probability that the first spin yields an odd number and the second spin yields an even number?

- A. $\frac{2}{7}$
- B. $\frac{12}{49}$
- C. $\frac{5}{17}$
- D. $\frac{1}{2}$
- E. $\frac{4}{7}$

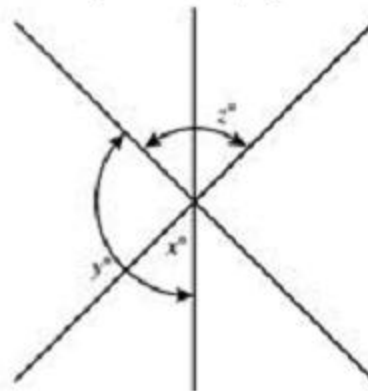
Reveal Solution

Discussion

Question #27

Topic 2

In the figure shown, if $y = 130$ and $z = 100$, then $x =$



- A. 40
- B. 45
- C. 50
- D. 55
- E. 60

Reveal Solution

Discussion

Question #28

Topic 2

\angle

\angle

In triangle ABC, side AB is congruent to side BC. If the degree measure of

In triangle ABC, side AB is congruent to side BC. If the degree measure of B is b , which of the following represents the degree measure of A?

- A. b
- B. $180 - b$
- C. $180 - 2b$
- D. $90 - b$
- E. $90 - 2b$

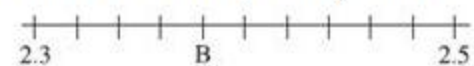
Reveal Solution

Discussion 1

Question #29

Topic 2

At ABC Corporation, five executives earn \$150,000 each per year, three executives earn \$170,000 each per year, and one executive earns \$180,000 per year. What is the average salary of these executives?



- A. \$156,250
- B. \$160,000
- C. \$164,480
- D. \$166,670
- E. \$170,000

Reveal Solution

Discussion

Question #30

Topic 2

It takes Paul m minutes to mow the lawn. Assuming he mows at a constant rate, after Paul mows for k minutes, what part of the lawn remains to be mowed?

- (A) $\frac{m - k}{m}$
- (B) $\frac{m}{k}$
- (C) $1 - \frac{k}{m}$

(D) $\frac{k - m}{k}$

(E) $\frac{k}{m}$

A. Option A

B. Option B

C. Option C

D. Option D

E. Option E

Reveal Solution

Discussion

Question #31

Topic 2

The table shows the average price of gasoline among 50 gasoline-service stations on three different days, along with the number of stations charging more and less than the average on each day.

Based on the information in the table, which of the following statements about the price of gasoline among all 50 stations must be true?

Average (Mean) Gasoline Price Among 50 Stations	Number of Stations Charging More Than Average Price	Number of Stations Charging Less Than Average Price
January 1st: \$2.50	22	17
February 1st: \$2.65	15	28
March 1st: \$2.40	23	23

I. On February 1st, the median price was less than the average price

II. On March 1st, the average price was equal to the median price.

III. The median price on March 1st was less than the median price on January 1st.

A. I only

B. I and II only

C. I and III only

D. II and III only

E. I, II, and III

Reveal Solution

Discussion

The interior angles of a certain quadrilateral are measured at the ratio 1:2:3:4. If each interior angle measures less than 180, what is the sum of the degree measures of the smallest and largest among these four angles?

- A. 218°
- B. 204°
- C. 180°
- D. 148°
- E. 108°

[Reveal Solution](#)[Discussion](#)

$$x^2, \frac{x^2 - 4}{x^2 - 2x} =$$

For all -

- A. $x - \frac{4}{x}$
- B. $\frac{1}{2x}$
- C. $2x + 1$
- D. $2 - x$
- E. $1 + \frac{2}{x}$

- A. Option A
- B. Option B
- C. Option C
- D. Option D
- E. Option E

[Reveal Solution](#)[Discussion](#)

[Reveal Solution](#)[Discussion](#) **1**

Question #34

Topic 2

In a geometric series, each term is a constant multiple of the preceding one. If x and y are the first two terms in a geometric series, which of the following represents the third term in the series?

A. $\frac{y^2}{x}$

B. $\frac{y}{x}$

C. $\frac{y^2}{x^2}$

D. xy

E. $\frac{x^2}{y}$

A. Option A

B. Option B

C. Option C

D. Option D

E. Option E

[Reveal Solution](#)[Discussion](#) **1**

Question #35

Topic 2

For what value of s is it true both that $0.2t = 2.2 - 0.6s$ and that $0.5s = 0.2t + 1.1$?

A. 1

B. 3

C. 10

D. 11

E. 30

[Reveal Solution](#)[Discussion](#)

[Reveal Solution](#)[Discussion](#)

Question #36

Topic 2

If a building b feet high casts a shadow f feet long, then, at the same time of day, a tree t feet high will cast a shadow how many feet long?

A. $\frac{t}{fb}$

B. $\frac{fb}{t}$

C. $\frac{b}{ft}$

D. $\frac{tb}{f}$

E. $\frac{ft}{b}$

A. Option A

B. Option B

C. Option C

D. Option D

E. Option E E

[Reveal Solution](#)[Discussion](#)

Question #37

Topic 2

In the standard coordinate plane, lines a and b intersect at point, and lines b and c intersect at point. What is the slope of line?

A. $\frac{1}{2}$

B. $-\frac{5}{2}$

C. $-\frac{2}{5}$

D. $-\frac{5}{8}$

E. It cannot be determined from the information given.

- A. Option A
- B. Option B
- C. Option C
- D. Option D
- E. Option E

Reveal Solution

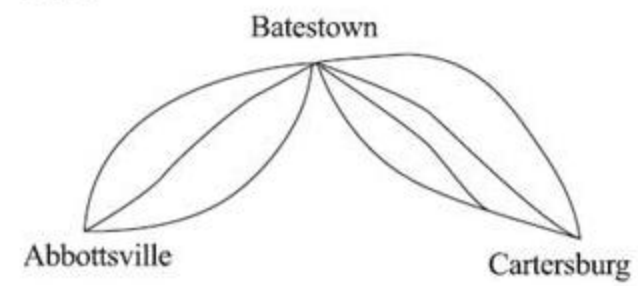
Discussion 1

Question #38

Topic 2

SIMULATION -

The diagram shows all roads connecting three towns. How many different routes can you drive from Abbottsville and Cartersburg if you drive through Batestown only once?



Reveal Solution

Discussion

Question #39

Topic 2

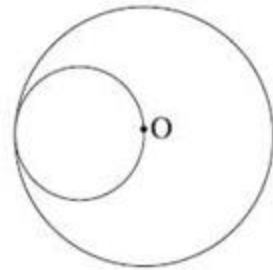
Given four empty chairs and three people, how many seating arrangements are possible – one person to a chair?

- A. 24
- B. 20
- C. 16
- D. 12
- E. 8

Reveal Solution

Discussion

In the figure, O lies at the center of the larger circle. What is the ratio of the smaller circles area to the larger circles area?



- A. 1:12
- B. 1:15
- C. 2:3
- D. 1:4
- E. 1:5

[Reveal Solution](#)[Discussion](#)

Eight years from now, Carries age will be twice Bens age. If Carries current age is C and Bens current age is B, which of the following represents Carries current age?

- A. B
- B. $B + 4$
- C. $B + 8$
- D. $2B + 8$
- E. $3B$

[Reveal Solution](#)[Discussion](#)

A drawer contains four pairs of socks: two gray pairs and two blue pairs. If two pairs are selected at random, what is the probability of choosing a blue pair and a gray pair?

A. $\frac{2}{3}$

- A. $\frac{1}{3}$
- B. $\frac{3}{5}$
- C. $\frac{1}{2}$
- D. $\frac{2}{5}$
- E. $\frac{1}{3}$

- A. Option A
- B. Option B
- C. Option C
- D. Option D
- E. Option E

Reveal Solution

Discussion

Question #43

Topic 2

The ratio of Jennifer's weekly salary to Carl's weekly salary is 3:2. If Carl were to receive a raise of \$200 per week, their salaries would be the same. What is Jennifer's current weekly salary?

- A. \$720
- B. \$600
- C. \$540
- D. \$480
- E. \$400

Reveal Solution

Discussion

← Previous Questions

Next Questions →

Question #44

Topic 2

SIMULATION -

The number of attendees at a certain annual conference is 256 this year and has always doubled every five years. How many people attended the conference 20 years ago?

Click on the answer box, then type in a number. Backspace to erase.

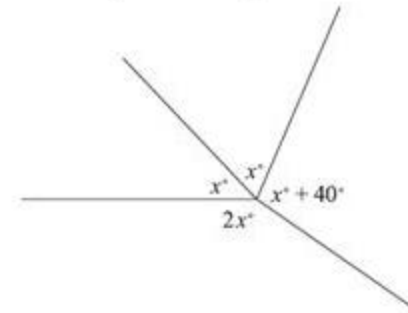
Reveal Solution

Discussion 1

Question #45

Topic 2

In the figure above, what is the value of x ?



- A. 36
- B. 40
- C. 60
- D. 64
- E. 72

Reveal Solution

Discussion

The length of Cassies family room is exactly two thirds the length of her master bedroom. Both rooms are rectangular, and the area of the two rooms is the same. If Cassies family room has a length of L and a width of W , which of the following represents the perimeter of her master bedroom?

A. $2L + \frac{4}{3}W$

B. $3L + \frac{2}{3}W$

C. $3L + \frac{1}{3}W$

D. $\frac{3}{2}L + W$

E. $3L + \frac{4}{3}W$

A. Option A

B. Option B

C. Option C

D. Option D

E. Option E

[Reveal Solution](#)[Discussion](#)

The number 40.5 is 500 times larger than which of the following numbers?

A. 0.810

B. 0.2025

C. 0.0810

D. 0.00005

D. 0.02025

E. 0.00810

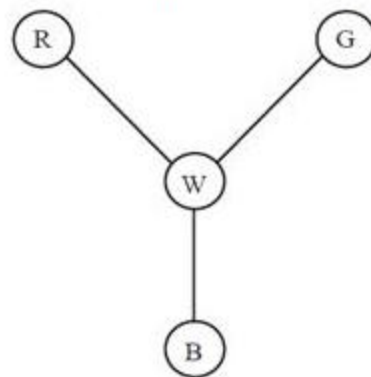
Reveal Solution

Discussion

Question #48

Topic 2

In the simple light show pictured above, a light starts at the center (white) at time zero and moves once every second in the following pattern: from white (W) to blue (B), back to white, then to green (G), back to white, then to red (R), and back to white in a counter-clockwise direction. If the light continues to move in this way, what will be the color sequence from the 208th second to the 209th second?



- A. white to green
- B. white to blue
- C. white to red
- D. red to white
- E. green to white

Reveal Solution

Discussion

Question #49

Topic 2

A solution of 60 ounces of sugar and water is 20% sugar. If you add x ounces of water to make a solution that is 5% sugar, which of the following represents the amount

of sugar in the solution after adding water?

- A. $60 - 40x$
- B. $.05(60x - 20)$
- C. $60(.05 + x)$
- D. $.20(60 + x)$
- E. $.05(60 + x)$

- A. Option A
- B. Option B
- C. Option C
- D. Option D
- E. Option E

Reveal Solution

Discussion

Question #50

Topic 2

If $p = (3)(5)(6)(9)(q)$, where q is a positive integer, then p must be divisible, with no remainder, by all the following EXCEPT for

- A. 27
- B. 36
- C. 45
- D. 54
- E. 90

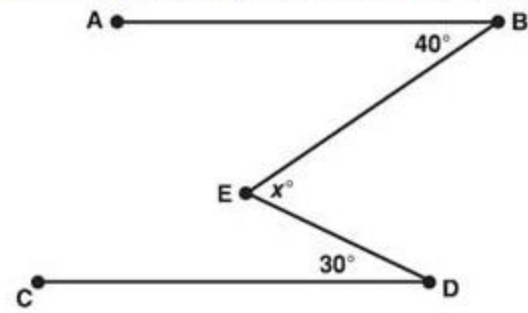
Reveal Solution

Discussion

Question #51

Topic 2

Referring to the figure above, for what value of would it be true that?



- A. 60
- B. 65
- C. 70
- D. 75
- E. 80

[Reveal Solution](#)

[Discussion](#)

Question #52

Topic 2

If Lynn can type a page in p minutes, what piece of the page can she do in 5 minutes?

- A. $5/p$
- B. $p - 5$
- C. $p + 5$
- D. $p/5$
- E. $1 - p + 5$

[Reveal Solution](#)

[Discussion](#)

Question #53

Topic 2

If Sally can paint a house in 4 hours, and John can paint the same house in 6 hour, how long will it take for both of them to paint the house together?

- A. 2 hours and 24 minutes
- B. 3 hours and 12 minutes
- C. 3 hours and 44 minutes
- D. 4 hours and 10 minutes
- E. 4 hours and 33 minutes

Reveal Solution

Discussion

Question #54

Topic 2

Employees of a discount appliance store receive an additional 20% off of the lowest price on an item. If an employee purchases a dishwasher during a 15% off sale, how much will he pay if the dishwasher originally cost \$450?

- A. \$280.90
- B. \$287
- C. \$292.50
- D. \$306
- E. \$333.89

Reveal Solution

Discussion

Question #55

Topic 2

The sales price of a car is \$12,590, which is 20% off the original price. What is the original price?

- A. \$14,310.40

A. \$14,990.90

B. \$14,990.90

C. \$15,290.70

D. \$15,737.50

E. \$16,935.80

[Reveal Solution](#)

[Discussion](#)

Question #56

Topic 2

Solve the following equation for A: $2A/3 = 8 + 4A$

A. -2.4

B. 2.4

C. 1.3

D. -1.3

E. 0

[Reveal Solution](#)

[Discussion](#)

Question #57

Topic 2

If Leah is 6 years older than her sister, Sue, and John is 5 years older than Leah, and the total of their ages is 41. Then how old is Sue?

A. 8

B. 10

C. 14

D. 19

E. 21

[Reveal Solution](#)

[Discussion](#)

Question #58

Topic 2

Alfred wants to invest \$4,000 at 6% simple interest rate for 5 years. How much interest will he receive?

- A. \$240
- B. \$480
- C. \$720
- D. \$960
- E. \$1,200

[Reveal Solution](#)

[Discussion](#)

Question #59

Topic 2

Jim is able to sell a hand-carved statue for \$670 which was a 35% profit over his cost. How much did the statue originally cost him?

- A. \$496.30
- B. \$512.40
- C. \$555.40
- D. \$574.90
- E. \$588.20

[Reveal Solution](#)

[Discussion](#)

Question #60

Topic 2

The city council has decided to add a 0.3% tax on motel and hotel rooms. If a traveler spends the night in a motel room that costs \$55 before taxes, how much will the city receive in taxes from him?

- A. 10 cents
- B. 11 cents
- C. 15 cents
- D. 17 cents
- E. 21 cents

[Reveal Solution](#)[Discussion](#)

A student receives his grade report from a local community college, but the GPA is smudged. He took the following classes: a 2 hour credit art, a 3 hour credit history, a 4 hour credit science course, a 3 hour credit mathematics course, and a 1 hour science lab. He received a "B" in the art class, an "A" in the history class, a "C" in the science class, a "B" in the mathematics class, and an "A" in the science lab. What was his GPA if the letter grades are based on a 4 point scale? (A=4, B=3, C=2, D=1, F=0)

- A. 2.7
- B. 2.8
- C. 3.0
- D. 3.1
- E. 3.2

[Reveal Solution](#)[Discussion](#)

Simon arrived at work at 8:15 A.M. and left work at 10: 30 P.M. If Simon gets paid by the hour at a rate of \$10 and time and for any hours worked over 8 in a day. How much did Simon get paid?

- A. \$120.25
- B. \$160.75
- C. \$173.75
- D. \$180
- E. \$182.50

Reveal Solution

Discussion 1

Question #63

Topic 2

Grace has 16 jellybeans in her pocket. She has 8 red ones, 4 green ones, and 4 blue ones. What is the minimum number of jellybeans she must take out of her pocket to ensure that she has one of each color?

- A. 4
- B. 8
- C. 12
- D. 13
- E. 16

Reveal Solution

Discussion

← Previous Questions

Next Questions →

Question #64

Topic 2

If $r = 5z$ then $15z = 3y$, then $r =$

- A. y
- B. $2y$
- C. $5y$
- D. $10y$
- E. $15y$

[Reveal Solution](#)[Discussion](#)

Question #65

Topic 2

If 300 jellybeans cost you x dollars. How many jellybeans can you purchase for 50 cents at the same rate?

- A. $150/x$
- B. $150x$
- C. $6x$
- D. $1500/x$
- E. $600x$

[Reveal Solution](#)[Discussion](#)

Lee worked 22 hours this week and made \$132. If she works 15 hours next week at the same pay rate, how much will she make?

- A. \$57
- B. \$90
- C. \$104
- D. \$112
- E. \$122 B

[Reveal Solution](#)[Discussion](#)

If $8x + 5x + 2x + 4x = 114$, the $5x + 3 =$

- A. 12
- B. 25
- C. 33
- D. 47
- E. 86

[Reveal Solution](#)[Discussion](#)

You need to purchase a textbook for nursing school. The book cost \$80.00, and the sales tax where you are purchasing the book is 8.25%. You have \$100. How much change will you receive back?

- A. \$5.20
- B. \$7.35
- C. \$13.40
- D. \$19.95
- E. \$21.25

Reveal Solution

Discussion

Question #69

Topic 2

You purchase a car making a down payment of \$3,000 and 6 monthly payments of \$225. How much have you paid so far for the car?

- A. \$3225
- B. \$4350
- C. \$5375
- D. \$6550
- E. \$6398

Reveal Solution

Discussion

Question #70

Topic 2

Your supervisor instructs you to purchase 240 pens and 6 staplers for the nurse's station. Pens are purchased in sets of 6 for \$2.35 per pack. Staplers are sold in sets of 2 for 12.95. How much will purchasing these products cost?

- A. \$132.85
- B. \$145.75
- C. \$162.90
- D. \$225.25
- E. \$226.75

Reveal Solution

Discussion

Question #71

Topic 2

If $y = 3$, then $y^3(y^3 - y) =$

- A. 300
- B. 459
- C. 648
- D. 999
- E. 1099

Reveal Solution

Discussion 1

Question #72

Topic 2

If the average of three numbers is V . If one of the numbers is Z and another is Y , what is the remaining number?

- A. $ZY - V$
- B. $Z/V - 3 - Y$
- C. $Z/3 - V - Y$
- D. $3V - Z - Y$
- E. $V - Z - Y$

Reveal Solution

Discussion

Question #73

Topic 2

Two cyclists start biking from a trail's start 3 hours apart. The second cyclist travels at 10 miles per hour and starts 3 hours after the first cyclist who is traveling at 6 miles per hour. How much time will pass before the second cyclist catches up with the first from the time the second cyclist started biking?

- A. 2 hours
- B. $4\frac{1}{2}$ hours
- C. $5\frac{3}{4}$ hours
- D. 6 hours
- E. 7 hours B

Reveal Solution

Discussion 1

Question #74

Topic 2

Jim can fill a pool carrying buckets of water in 30 minutes. Sue can do the same job in 45 minutes. Tony can do the same job in 1 hours. How quickly can all three fill the

pool together?

- A. 12 minutes
- B. 15 minutes
- C. 21 minutes
- D. 23 minutes
- E. 28 minutes

Reveal Solution

Discussion 2

Question #75

Topic 2

Mary is reviewing her algebra quiz. She has determined that one of her solutions is incorrect. Which one is it?

- A. $2x + 5(x-1) = 9x - 2$
- B. $p - 3(p-5) = 10p - 2.5$
- C. $4y + 3y = 28y - 4$
- D. $5w + 6w - 3w = 64w - 8$
- E. $t - 2t - 3t = 32t - 8$

Reveal Solution

Discussion 1

Question #76

Topic 2

What simple interest rate will Susan need to secure to make \$2,500 in interest on a \$10,000 principal over 5 years?

A. 4%

B. 5 %

C. 6%

D. 7%

E. 8%

Reveal Solution

Discussion

Question #77

Topic 2

A study reported that in a random sampling of 100 women over the age of 35 showed that 8 of the women were married 2 or more times. Based on the study results, how many women in a group of 5,000 women over the age of 35 would likely be married 2 or more times?

A. 55

B. 150

C. 200

D. 400

E. 600

Reveal Solution

Discussion

Question #78

Topic 2

John is traveling to a meeting that is 28 miles away. He needs to be there in 30 minutes. How fast does he need to go to make it to the meeting on time?

- A. 25 mph
- B. 37 mph
- C. 41 mph
- D. 49 mph
- E. 56 mph

[Reveal Solution](#)

[Discussion](#)

Question #79

Topic 2

If Steven can mix 20 drinks in 5 minutes, Sue can mix 20 drinks in 10 minutes, and Jack can mix 20 drinks in 15 minutes, how much time will it take all 3 of them working together to mix the 20 drinks?

- A. 2 minutes and 44 seconds
- B. 2 minutes and 58 seconds
- C. 3 minutes and 10 seconds
- D. 3 minutes and 26 seconds
- E. 4 minutes and 15 seconds

[Reveal Solution](#)

[Discussion](#)

Question #80

Topic 2

If Sam can do a job in 4 days that Lisa can do in 6 days and Tom can do in 2 days, how long would the job take if Sam, Lisa, and Tom worked together to complete it?

- A. 0.8 days

B. 1.09 days

C. 1.23 days

D. 1.65 days

E. 1.97 days

Reveal Solution

Discussion

Question #81

Topic 2

Jim has 5 pieces of string. He needs to choose the piece that will be able to go around his 36-inch waist. His belt broke, and his pants are falling down. The piece needs to be at least 4 inches longer than his waist so he can tie a knot in it, but it cannot be more than 6 inches longer so that the ends will not show from under his shirt. Which of the following pieces of string will work the best?

A. 3 feet

B. $3\frac{3}{4}$ feet

C. $3\frac{1}{2}$ feet

D. $3\frac{1}{4}$ feet

E. $2\frac{1}{2}$ feet

Reveal Solution

Discussion

Question #82

Topic 2

The last week of a month a car dealership sold 12 cars. A new sales promotion came out the first week of the next month and the sold 19 cars that week. What was the percent increase in sales from the last week of the previous month compared to the first week of the next month?

A. 58%

B. 119%

C. 158%

D. 175%

E. 200%

Reveal Solution

Discussion

Question #83

Topic 2

If two planes leave the same airport at 1:00 PM, how many miles apart will they be at 3:00 PM if one travels directly north at 150 mph and the other travels directly west at 200 mph?

A. 50 miles

B. 100 miles

C. 500 miles

D. 700 miles

E. 1,000 miles

Reveal Solution

Discussion

← Previous Questions

Next Questions →

Question #84

Topic 2

During a 5-day festival, the number of visitors tripled each day. If the festival opened on a Thursday with 345 visitors, what was the attendance on that Sunday?

- A. 345
- B. 1,035
- C. 1,725
- D. 3,105
- E. 9,315

[Reveal Solution](#)[Discussion](#)

Question #85

Topic 2

Round 907.457 to the nearest tens place.

- A. 908.0
- B. 910
- C. 907.5
- D. 900
- E. 907.46

[Reveal Solution](#)[Discussion](#)

At a certain high school, the respective weights for the following subjects are: Mathematics 3, English 3, History 2, Science 2 and Art 1. What is a student's average whose marks were the following: Geometry 89, American Literature 92, American History 94, Biology 81, and Sculpture 85?

- A. 85.7
- B. 87.8
- C. 88.9
- D. 89.4
- E. 90.2

[Reveal Solution](#)[Discussion](#)

Ginger over the course of an average work-week wanted to see how much she spent on lunch daily. On Monday and Thursday, she spent \$5.43 total. On Tuesday and Wednesday, she spent \$3.54 on each day. On Friday, she spent \$7.89 on lunch. What was her average daily cost?

- A. \$3.19
- B. \$3.75
- C. \$3.90
- D. \$4.08
- E. \$4.23

[Reveal Solution](#)[Discussion](#)

Question #88

Topic 2

What is 1230.932567 rounded to the nearest hundredths place?

- A. 1200
- B. 1230.9326
- C. 1230.93
- D. 1230
- E. 1230.933

[Reveal Solution](#)[Discussion](#)

Question #89

Topic 2

Subtract the following numbers rounded to the nearest tenths place.

134.679

-45.548

-67.8807

- A. 21.3
- B. 21.25
- C. -58.97
- D. -59.0
- E. 1 A

[Reveal Solution](#)[Discussion](#) **1****Question #90***Topic 2*

What is the absolute value of -9?

- A. -9
- B. 9
- C. 0
- D. -1
- E. 1

[Reveal Solution](#)[Discussion](#)**Question #91***Topic 2*

What is the median of the following list of numbers? 4, 5, 7, 9, 10, 12

- A. 6
- B. 7.5
- C. 7.8
- D. 8
- E. 9

[Reveal Solution](#)[Discussion](#)

Question #92

Topic 2

What is the mathematical average of the number of weeks in a year, seasons in a year, and the number of days in January?

- A. 36
- B. 33
- C. 32
- D. 31
- E. 29

[Reveal Solution](#)[Discussion](#)

Question #93

Topic 2

In a college, some courses contribute more towards an overall GPA than other courses. For example, a science class is worth 4 points; mathematics is worth 3 points; history is worth 2 points; and English is worth 3 points. The values of the grade letters are as follows, A= 4, B=3, C=2, D=1, F=0. What is the GPA of a student who made a "C" in Trigonometry, a "B" in American History, an "A" in Botany, and a "B" in Microbiology?

- A. 2.59
- B. 2.86
- C. 3.08
- D. 3.33
- E. 3.67

[Reveal Solution](#)[Discussion](#)

Question #94

Topic 2

Over the course of a week, Fred spent \$28.49 on lunch. What was the average cost per day?

- A. \$4.07
- B. \$3.57
- C. \$6.51
- D. \$2.93
- E. \$5.41

[Reveal Solution](#)[Discussion](#)

Question #95

Topic 2

A roast was cooked at 325° F in the oven for 4 hours. The internal temperature rose from 32° F to 145° F. What was the average rise in temperature per hour?

- A. 20.2° F/hr
- B. 28.25° F/hr
- C. 32.03° F/hr
- D. 37° F/hr
- E. 37.29° F/hr

[Reveal Solution](#)[Discussion](#)

In the number 743.25 which digit represents the tenths space?

- A. 2
- B. 3
- C. 4
- D. 5
- E. 6

[Reveal Solution](#)[Discussion](#)

Add $0.98 + 45.102 + 32.3333 + 31 + 0.00009$

- A. 368.573
- B. 210.536299
- C. 109.41539
- D. 99.9975
- E. 80.8769543

[Reveal Solution](#)[Discussion](#)

Find $0.12 \div 1$ -

- A. 12
- B. 1.2
- C. .12
- D. .012
- E. .0012

[Reveal Solution](#)[Discussion](#)

$(9 \div 3) \times (8 \div 4) =$

- A. 1
- B. 6
- C. 72
- D. 576
- E. 752

[Reveal Solution](#)[Discussion](#)

$6 \times 0 \times 5$

A. 30

B. 11

C. 25

D. 0

E. 27

Reveal Solution

Discussion

Question #101

Topic 2

$7.95 \div 1.5$

A. 2.4

B. 5.3

C. 6.2

D. 7.3

E. 7.5

Reveal Solution

Discussion

Question #102

Topic 2

$-32 + 7$ equals:

A. -25

B. 25

C. -26

D. 26

E. 27

Reveal Solution

Discussion

Question #103

Topic 2

-37 + -47 equals:

A. 64

B. -84

C. 65

D. -75

E. -66

Reveal Solution

Discussion

← Previous Questions

Next Questions →

Question #104

Topic 2

41% equals:

- A. 4.1
- B. .41
- C. .041
- D. .0041
- E. .00415

[Reveal Solution](#)[Discussion](#)

Question #105

Topic 2

Describe the following sequence in mathematical terms. 144, 72, 36, 18, 9

- A. Descending arithmetic sequence
- B. Ascending arithmetic sequence
- C. Descending geometric sequence
- D. Ascending geometric sequence
- E. Miscellaneous sequence

[Reveal Solution](#)[Discussion](#)

Question #106

Topic 2

Which of the following is not a whole number followed by its square?

- A. 1, 1
- B. 6, 36
- C. 8, 64
- D. 10, 100
- E. 11, 144

[Reveal Solution](#)[Discussion](#)

Question #107

Topic 2

A nurse has to record her temperatures in Celsius but her thermometer reads Fahrenheit. A patient's temperature is 100.7° F. What is the temperature in °C?

- A. 32° C
- B. 36.5° C
- C. 38.2° C
- D. 213.3° C
- E. 223.7° C

[Reveal Solution](#)[Discussion](#)

Art realized that he had 2 more quarters than he had originally thought in his pocket. If all of the change in his pocket is quarters and it totals to \$8.75, how many quarters did he originally think were in his pocket?

- A. 27
- B. 29
- C. 31
- D. 33
- E. 35

[Reveal Solution](#)[Discussion](#)

There are 12 more apples than oranges in a basket of 36 apples and oranges. How many apples are in the basket?

- A. 12
- B. 15
- C. 24
- D. 28
- E. 36

[Reveal Solution](#)[Discussion](#)

Which of the following correctly identifies 4 consecutive odd integers where the sum of the middle two integers is equal to 24?

- A. 5, 7, 9, 11
- B. 7, 9, 11, 13
- C. 9, 11, 13, 15
- D. 11, 13, 15, 17
- E. 13, 15, 17, 19

[Reveal Solution](#)[Discussion](#)

What is the next number in the sequence? 6, 12, 24, 48, ___

- A. 72
- B. 96
- C. 108
- D. 112
- E. 124

[Reveal Solution](#)[Discussion](#)

Which of the following numbers could be described in the following way: an integer that is a natural, rational and whole number?

- A. 0
- B. 1
- C. 2.33
- D. -3
- E. none of the above

[Reveal Solution](#)[Discussion](#)

Of the following units, which would be most likely to measure the amount of sugar needed in a recipe for 2 dozen cookies

- A. degrees Celsius
- B. milliliters
- C. quarts
- D. kilograms
- E. cups

[Reveal Solution](#)[Discussion](#)

104 is not equal to which of the following?

- A. 100,000
- B. 0.1×10^5
- C. $10 \times 10 \times 10 \times 10$
- D. 102×102
- E. 10,000

[Reveal Solution](#)

[Discussion](#) **1**

Question #115

Topic 2

Multiply 104 by 102 -

- A. 108
- B. 102
- C. 106
- D. 10-2
- E. 103

[Reveal Solution](#)

[Discussion](#) **1**

Question #116

Topic 2

Divide x^5 by x^2 -

- A. x^7
- B. x^4
- C. x^{10}
- D. x^3
- E. $x^{2.5}$

Reveal Solution

Discussion

Question #117

Topic 2

Find 8.23×10^9 -

- A. 0.00000000823
- B. 0.000000823
- C. 8.23
- D. 8230000000
- E. 823000000000 D

Reveal Solution

Discussion

Question #118

Topic 2

83,000 equals:

- A. 83.0×10^4
- B. 8.3×10^4
- C. 8.3×10^3
- D. 83.0×10^5
- E. 83.0×10^2

Reveal Solution

Discussion

Question #119

Topic 2

00875 equals:

- A. 8.75×10^{-2}
- B. 8.75×10^{-3}
- C. 8.75×10^{-4}
- D. 87.5×10^{-3}
- E. 875×10^{-4}

Reveal Solution

Discussion

Question #120

Topic 2

Which of the following is not a fraction equivalent to $\frac{3}{4}$?

A. $\frac{6}{8}$

B. $\frac{9}{12}$

C. $\frac{12}{18}$

D. $\frac{21}{28}$

E. $\frac{27}{36}$

Reveal Solution

Discussion

Question #121

Topic 2

Solve: $0.25 + 0.65 -$

A. $\frac{1}{2}$

B. $\frac{9}{10}$

C. $\frac{4}{7}$

D. $\frac{2}{9}$

E. $\frac{5}{16}$

Reveal Solution

Discussion

Question #122

Topic 2

Which of the following statements is false?

- A. In the fraction $\frac{1}{2}$ one is the numerator.
- B. When 4.89 is rounded to the ones place, the answer is 5.
- C. Ten thousandths place is located 5 places to the right of the decimal
- D. $\frac{7}{6}$ is described as an improper fraction.
- E. $3\frac{1}{3}\%$ is equivalent to $\frac{1}{3}$

Reveal Solution

Discussion

Question #123

Topic 2

Find the square of $\frac{25}{9}$ -

- A. $\frac{5}{3}$
- B. $\frac{3}{5}$
- C. $7\frac{58}{81}$
- D. $\frac{15}{2}$
- E. $\frac{650}{81}$

Reveal Solution

Discussion

← Previous Questions

Next Questions →

Question #124

Topic 2

Sarah needs to make a cake and some cookies. The cake requires $\frac{3}{8}$ cup of sugar and the cookies require $\frac{3}{5}$ cup of sugar. Sarah has $\frac{15}{16}$ cups of sugar. Does she have enough sugar, or how much more does she need?

- A. She has enough sugar.
- B. She needs $\frac{1}{8}$ of a cup of sugar.
- C. She needs $\frac{3}{80}$ of a cup of sugar.
- D. She needs $\frac{4}{19}$ of a cup of sugar.
- E. She needs $\frac{1}{9}$ of a cup of sugar.

[Reveal Solution](#)[Discussion](#)

Question #125

Topic 2

There are 8 ounces in a $\frac{1}{2}$ pound. How many ounces are in $7\frac{3}{4}$ lbs?

- A. 12 ounces
- B. 86 ounces
- C. 119 ounces
- D. 124 ounces
- E. 138 ounces

[Reveal Solution](#)[Discussion](#)

If the value of x and y in the following fraction are both tripled, how does the value of the fraction change?

$$\frac{xz}{y}$$

- A. increases by half
- B. decreases by half
- C. Triples
- D. Doubles
- E. remains the same

[Reveal Solution](#)[Discussion](#)

Which of these numbers is a factor of 21?

- A. 2
- B. 5
- C. 7
- D. 42
- E. 44

[Reveal Solution](#)[Discussion](#)**Question #128***Topic 2*

If the average person drinks 8, (8oz) glasses of water per day, a person who drinks 12.8 oz of water after a morning exercise session has consumed what fraction of the daily average?

- A. $\frac{1}{3}$
- B. $\frac{1}{5}$
- C. $\frac{1}{7}$
- D. $\frac{1}{9}$
- E. $\frac{1}{10}$

[Reveal Solution](#)[Discussion](#)**Question #129***Topic 2*

You need $\frac{4}{5}$ cups of water for a recipe. You accidentally put $\frac{1}{3}$ cups into the mixing bowl with the dry ingredients. How much more water in cups do you need to add?

- A. $\frac{1}{3}$ cups
- B. $\frac{2}{3}$ cups
- C. $\frac{1}{15}$ cups
- D. $\frac{7}{15}$ cups
- E. $\frac{7}{16}$ cups

[Reveal Solution](#)[Discussion](#)

Question #130

Topic 2

$$3/4 - 1/2 =$$

- A. $1/4$
- B. $1/3$
- C. $1/2$
- D. $2/3$
- E. $2/5$

[Reveal Solution](#)[Discussion](#)

Question #131

Topic 2

$$7 \frac{1}{2} - 5 \frac{3}{8} =$$

- A. $1 \frac{1}{2}$
- B. $1 \frac{2}{3}$
- C. $2 \frac{1}{8}$
- D. $3 \frac{1}{4}$
- E. 3

[Reveal Solution](#)[Discussion](#)

Question #132

Topic 2

If a circle has the diameter of 8, what is the circumference?

- A. 6.28
- B. 12.56
- C. 25.13
- D. 50.24
- E. 100.48

[Reveal Solution](#)[Discussion](#)

Question #133

Topic 2

If a discount of 20% off the retail price of a desk saves Mark \$45, how much did he pay for the desk?

- A. \$145
- B. \$160
- C. \$180
- D. \$210
- E. \$215

[Reveal Solution](#)[Discussion](#)

A customer pays \$1,100 in state taxes on a newly purchased car. What is the value of the car if state taxes are 8.9% of the value?

- A. \$9,765.45
- B. \$10,876.90
- C. \$12,359.55
- D. \$14,345.48
- E. \$15,745.45

[Reveal Solution](#)[Discussion](#)

How many years does Steven need to invest his \$3,000 at 7% to earn \$210 in simple interest?

- A. 1 year
- B. 2 years
- C. 3 years
- D. 4 years
- E. 5 years

[Reveal Solution](#)[Discussion](#)

Sabrina's boss states that she will increase Sabrina's salary from \$12,000 to \$14,000 per year if she enrolls in business courses at a local community college.

What percent increase in salary will result from Sabrina taking the business courses?

- A. 15%
- B. 16.7%
- C. 17.2%
- D. 85%
- E. 117%

[Reveal Solution](#)

[Discussion](#)

Question #137

Topic 2

35% of what number is 70?

- A. 100
- B. 110
- C. 150
- D. 175
- E. 200

[Reveal Solution](#)

[Discussion](#)

Question #138

Topic 2

What number is 5% of 2000?

- A. 50
- B. 100
- C. 150
- D. 200
- E. 250

Reveal Solution

Discussion

Question #139

Topic 2

What percent of 90 is 27?

- A. 15%
- B. 20%
- C. 30%
- D. 33%
- E. 41%

Reveal Solution

Discussion

Question #140

Topic 2

Jim works for \$15.50 per hour for a health care facility. He is supposed to get a 75 cent per hour raise at one year of service. What will his percent increase in hourly pay

be?

- A. 2.7%
- B. 3.3%
- C. 133%
- D. 4.8%
- E. 105%

Reveal Solution

Discussion

Question #141

Topic 2

If 45 is 120% of a number, what is 80% of the same number?

- A. 30
- B. 32
- C. 36
- D. 38
- E. 41

Reveal Solution

Discussion

Question #142

Topic 2

How long will Lucy have to wait before her \$2,500 invested at 6% earns \$600 in simple interest?

A. 2 years

B. 3 years

C. 4 years

D. 5 years

E. 6 years

Reveal Solution

Discussion

Question #143

Topic 2

What is 35% of a number if 12 is 15% of a number?

A. 5

B. 12

C. 28

D. 33

E. 62

Reveal Solution

Discussion

← Previous Questions

Next Questions →

Question #144

Topic 2

A computer is on sale for \$1600, which is a 20% discount off the regular price. What is the regular price?

- A. \$1800
- B. \$1900
- C. \$2000
- D. \$2100
- E. \$2200

[Reveal Solution](#)[Discussion](#)

Question #145

Topic 2

A car dealer sells a SUV for \$39,000, which represents a 25% markup over the dealer's cost. What was the cost of the SUV to the dealer?

- A. \$29,250
- B. \$31,200
- C. \$32,500
- D. \$33,800
- E. \$33,999

[Reveal Solution](#)[Discussion](#)

Question #146

Topic 2

After having to pay increased income taxes this year, Edmond has to sell his BMW. Edmond bought the car for \$49,000, but he sold it for a 20% loss. What did Edmond sell the car for?

- A. \$24,200
- B. \$28,900
- C. \$35,600
- D. \$37,300

E. \$39,200

[Reveal Solution](#)

[Discussion](#)

Question #147

Topic 2

At a company fish fry, $\frac{1}{2}$ in attendance are employees. Employees' spouses are $\frac{1}{3}$ of the attendance. What is the percentage of the people in attendance who are not employees or employee spouses?

- A. 10.5%
- B. 16.7%
- C. 25%
- D. 32.3%
- E. 38%

[Reveal Solution](#)

[Discussion](#)

Question #148

Topic 2

If 6 is 24% of a number, what is 40% of the same number?

- A. 8
- B. 10
- C. 15
- D. 20
- E. 25

[Reveal Solution](#)

[Discussion](#)

Question #149

Topic 2

25% of 400 =

- A. 100

- B. 200
- C. 800
- D. 10,000
- E. 12,000

Reveal Solution

Discussion

Question #150

Topic 2

22% of \$900 =

- A. 90
- B. 198
- C. 250
- D. 325
- E. 375

Reveal Solution

Discussion

Question #151

Topic 2

Which of the following percentages is equal to 0.45?

- A. 0.045%
- B. 0.45%
- C. 4.5%
- D. 45%
- E. 0.0045%

Reveal Solution

Discussion

Question #152

Topic 2

Which of these percentages equals 1.25?

- A. 0.125%
- B. 12.5%
- C. 125%
- D. 1250%
- E. 1250.5%

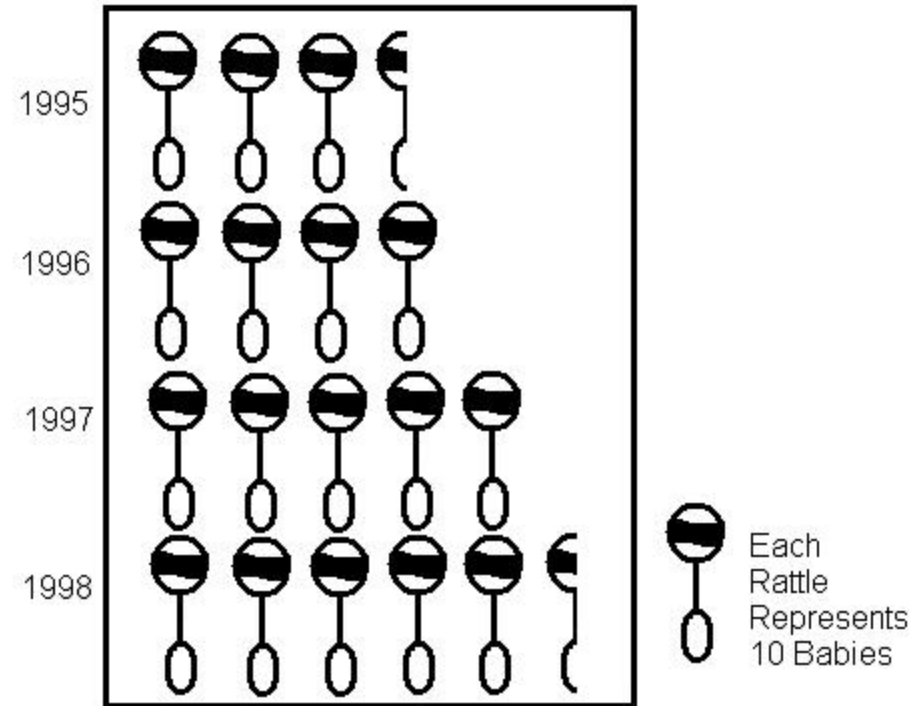
Reveal Solution

Discussion

Question #153

Topic 2

The Number of Babies Delivered By
Dr. Jones from 1995 to 1998



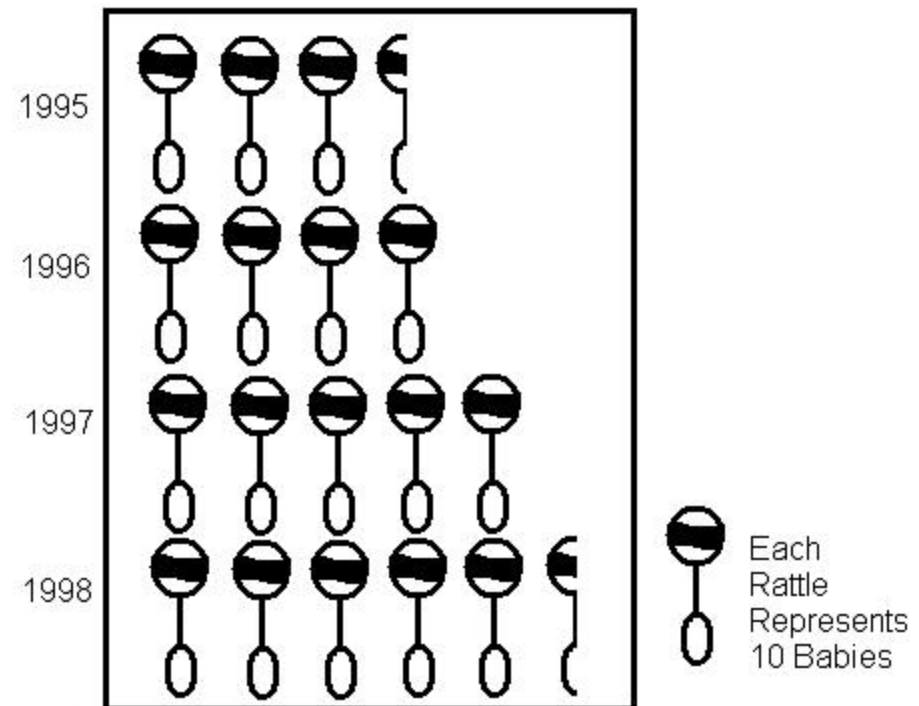
How many babies did Dr. Jones deliver in 1998?

- A. 25
- B. 35
- C. 45
- D. 55
- E. 65

Reveal Solution

Discussion

The Number of Babies Delivered By
Dr. Jones from 1995 to 1998



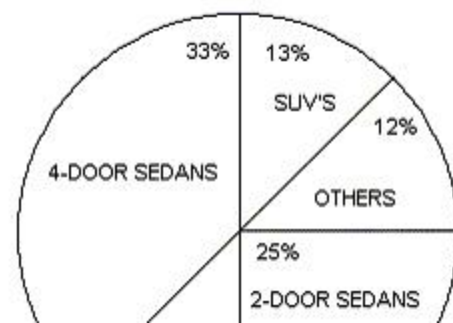
If Dr. Jones delivered 85 babies in 1999, how many rattles would represent this number?

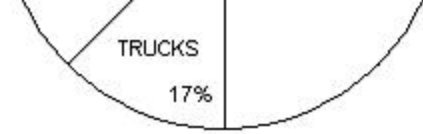
- A. $6 \frac{1}{2}$
- B. 7
- C. $7 \frac{1}{2}$
- D. 8
- E. $8 \frac{1}{2}$

Reveal Solution

Discussion

Percentage of Vehicle Types that XYZ
Auto Company sold in 1999





If 7,650 trucks were sold in 1999, how many total vehicles were sold in 1999 by XYZ Auto Company?

- A. 35,000
- B. 40,000
- C. 45,000
- D. 50,000
- E. 55,000

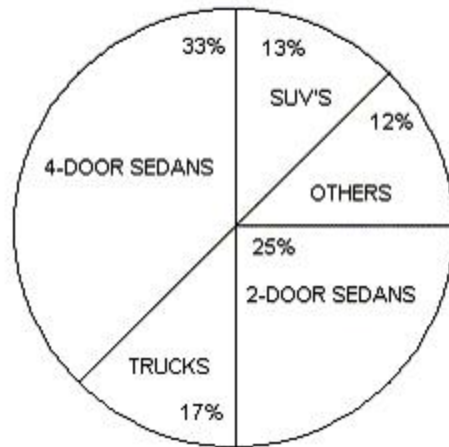
Reveal Solution

Discussion 1

Question #156

Topic 2

Percentage of Vehicle Types that XYZ Auto Company sold in 1999



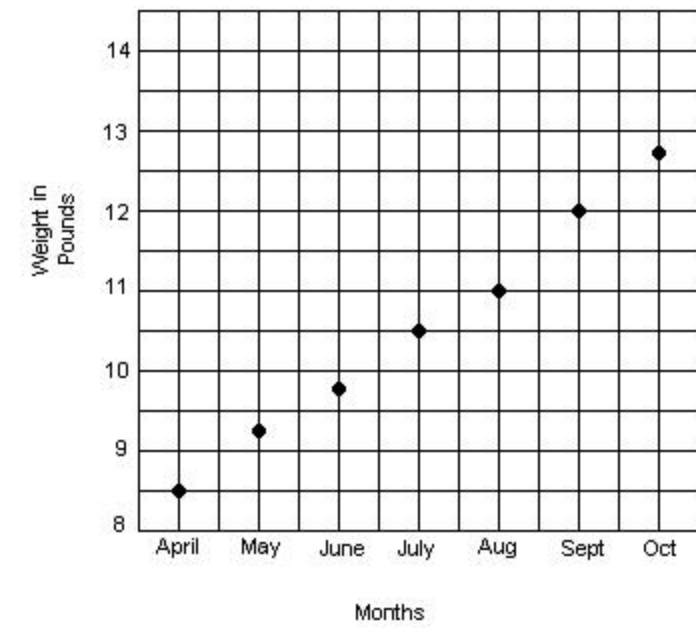
If 3,750 2-door sedans were sold in 1999, then how many 4-door sedans were sold in 1999 by XYZ Auto Company?

- A. 3,578
- B. 4,950
- C. 5,120
- D. 5,670
- E. 5,845

Reveal Solution

Discussion

Infant Weight Gain in Pounds
Over First Six Months of Life



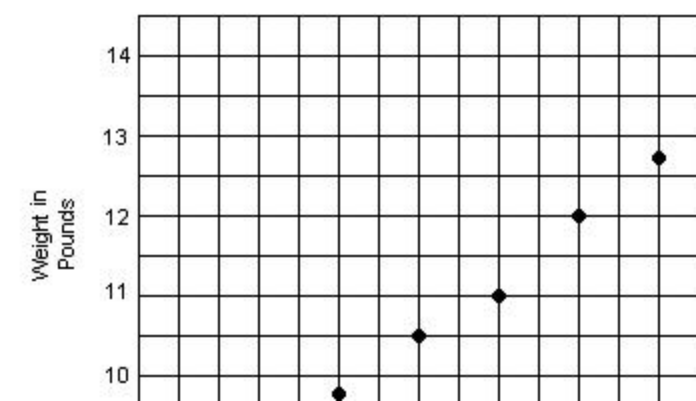
What was the average weight of the infant from April to October, rounded to the nearest ounce?

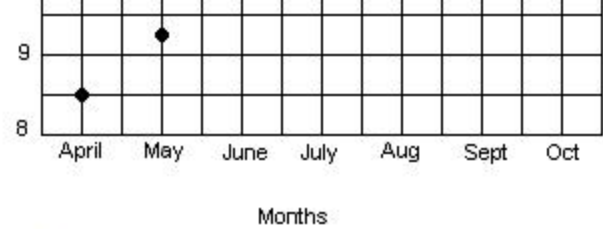
- A. 10 lbs
- B. 10 lbs 5 ounces
- C. 10 lbs 9 ounces
- D. 11 lbs 5 ounces
- E. 11 lbs 9 ounces

Reveal Solution

Discussion

Infant Weight Gain in Pounds
Over First Six Months of Life





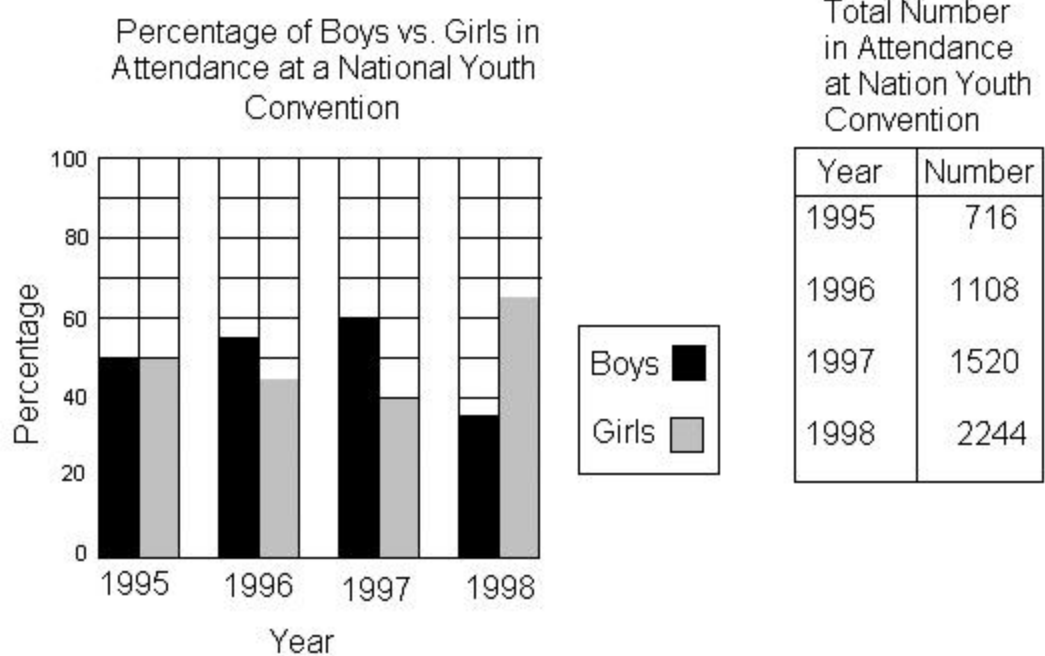
Between which two months did the infant gain the most weight?

- A. April and May
- B. June and July
- C. July and August
- D. August and September
- E. September and October

[Reveal Solution](#) [Discussion](#)

Question #159

Topic 2



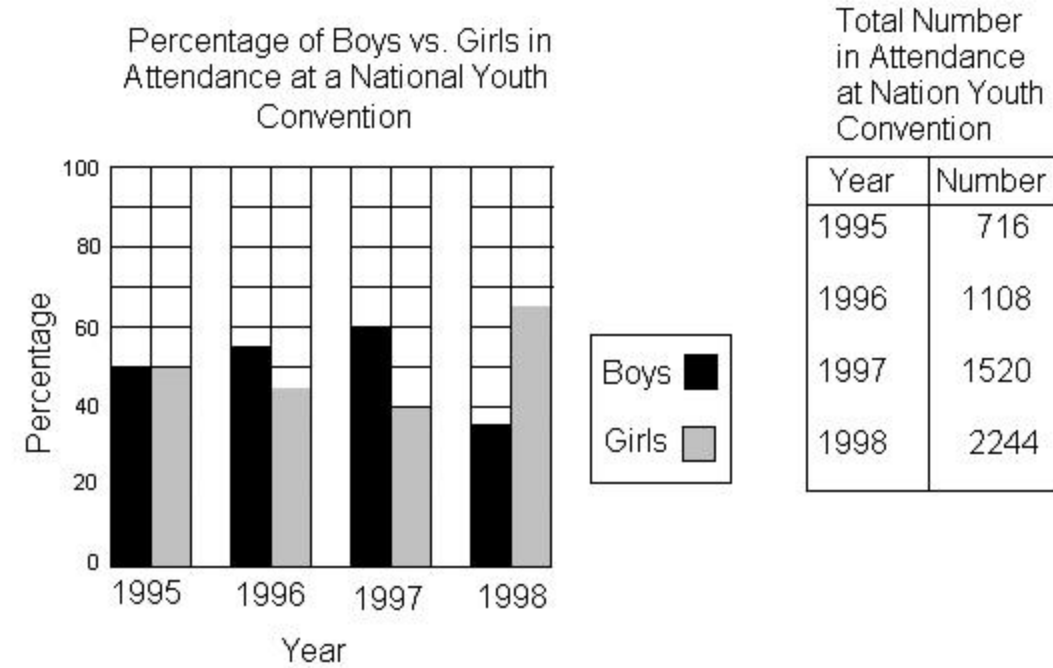
Which year did the same number of boys and girls attend the conference?

- A. 1995
- B. 1996
- C. 1997
- D. 1998
- E. None

[Reveal Solution](#)[Discussion](#)

Question #160

Topic 2



Which two years did the least number of boys attend the convention?

- A. 1995 and 1996
- B. 1995 and 1998
- C. 1996 and 1997
- D. 1996 and 1992
- E. 1997 and 1998

[Reveal Solution](#)[Discussion](#)

Question #161

Topic 2

An instrument store gives a 10% discount to all students off the original cost of an instrument. During a back to school sale an additional 15% is taken off the discounted price. Julie, a student at the local high school, purchases a flute for \$306. How much did it originally cost?

- A. \$325
- B. \$375

C. \$400

D. \$408

E. \$425

Reveal Solution

Discussion

Question #162

Topic 2

If $y(x-1)=z$ then $x=$

A. $y-z$

B. $z/y + 1$

C. $y(z-1)$

D. $z(y-1)$

E. $1-zy$

Reveal Solution

Discussion

Question #163

Topic 2

Which of the following values is NOT equal to $34(58+9)$?

A. 34×67

B. $58(34+9)$

C. $34 \times 58 + 34 \times 9$

D. $1,972 + 306$

E. $(9 + 58) 34$

Reveal Solution

Discussion

← Previous Questions

Next Questions →

Question #164

Topic 2

Two angles of a triangle measure 15° and 85° . What is the measure for the third angle?

- A. 50°
- B. 55°
- C. 60°
- D. 80°
- E. 90°

[Reveal Solution](#)[Discussion](#)

Question #165

Topic 2

If 5 ounces is equal to 140 grams, then 2 pounds of ground meat is equal to how many grams?

- A. 863
- B. 878
- C. 896
- D. 915
- E. 932

[Reveal Solution](#)[Discussion](#)

Question #166

Topic 2

Sarah is twice as old as her youngest brother. If the difference between their ages is 15 years. How old is her youngest brother?

- A. 10
- B. 15
- C. 20
- D. 25
- E. 30

Reveal Solution

Discussion

Question #167

Topic 2

What will it cost to tile a kitchen floor that is 12 feet wide by 20 feet long if the tile cost \$8.91 per square yard?

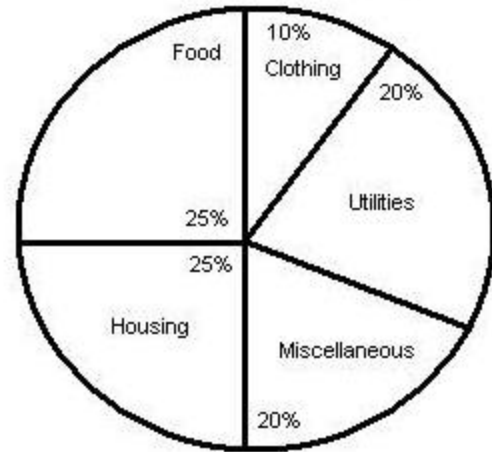
- A. \$224.51
- B. \$237.60
- C. \$246.55
- D. \$271.38
- E. \$282.32

Reveal Solution

Discussion

Question #168

Topic 2



January	\$2578
February	\$2432
March	\$2668
April	\$2490
May	\$2622
June	\$2555

What was the average amount of money that Jessica's budget allowed for clothing the first six months of 2001?

- A. \$249.90
- B. \$250.40
- C. \$251.32
- D. \$253.33
- E. \$255.75 E

Reveal Solution

Discussion 1

Question #169

Topic 2

Jonathan can type a 20 page document in 40 minutes, Susan can type it in 30 minutes, and Jack can type it in 24 minutes. Working together, how much time will it take them to type the same document?

- A. 5 minutes
- B. 10 minutes
- C. 15 minutes
- D. 18 minutes

E. 20 minutes

Reveal Solution

Discussion

Question #170

Topic 2

A hockey team won 6 games and lost 8. What is the ratio of wins to number of games?

A. $6/8$

B. $8/6$

C. $3/7$

D. $8/14$

E. $6/7$

Reveal Solution

Discussion

Question #171

Topic 2

Sue receives a base salary of \$90 weekly plus a 12% commission on all sales. Sue had \$3,000 in sales this week. How much did she make total?

A. \$375

B. \$450

C. \$480

D. \$510

E. \$525

Reveal Solution

Discussion

Question #172

Topic 2

If the perimeter of a rectangular house is $25 \frac{1}{3}$ yards, and the length is 22 feet. What is the width?

- A. 16 feet
- B. 35 feet
- C. 37 feet
- D. 40 feet
- E. 42 feet

Reveal Solution

Discussion

Question #173

Topic 2

Jimmy made a 15% profit on the sale of a custom designed boat, and the original cost of the boat was \$15,000. The boat sold for how much?

- A. \$17,250.00
- B. \$16,540.44
- C. \$16,230.34
- D. \$15,980.55
- E. \$15,870.88

Reveal Solution

Discussion

Question #174

Topic 2

If $3x + 5x = -8$, then $x + 1 =$

- A. -2
- B. -1
- C. 0
- D. 1
- E. 2

Reveal Solution

Discussion

Question #175

Topic 2

Which of the following would be an appropriate unit to measure sugar for a cookie recipe?

- A. liters
- B. cups
- C. quarts
- D. kilograms
- E. Pounds

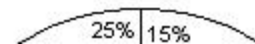
Reveal Solution

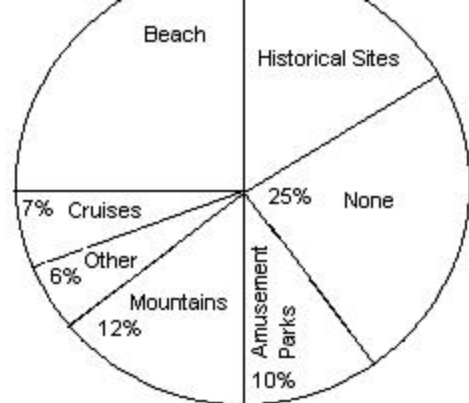
Discussion

Question #176

Topic 2

Vacation Destinations for Students
Attending Washington Middle School





If 500 students attend Washington Middle School, how many are going to the mountains for vacation?

- A. 25
- B. 60
- C. 75
- D. 100
- E. 125

Reveal Solution

Discussion

Question #177

Topic 2

If a $\frac{1}{4}$ of a teaspoon is 1 ml, then how many milliliters are in 6 teaspoons?

- A. 10 ml
- B. 12.5 ml
- C. 15 ml
- D. 20 ml
- E. 24 ml

Reveal Solution

Discussion

Question #178

Topic 2

A scale on a map states that every $\frac{1}{4}$ of an inch represents 20 miles. If two cities are $3\frac{1}{2}$ inches apart, how many miles are actually between the two cities?

- A. 14 miles
- B. 20 miles
- C. 125 miles
- D. 230 miles
- E. 280 miles

[Reveal Solution](#)[Discussion](#)

Question #179

Topic 2

Michelle wants to expand her flowerbed by increasing the length and width each by 2 ft. What will the new area of the flowerbed be, if L and W represent the original dimensions of the flowerbed's length and width?

- A. $2LW$
- B. $2(L+W)$
- C. $2L+2W$
- D. $(L+2)(W+2)$
- E. $LW/2$

[Reveal Solution](#)[Discussion](#)

Melinda's lights went out. She has 3 pairs of red socks in her drawer, 2 pairs of black socks, and 5 pairs of white socks. What is the minimum number of pairs she must remove from the drawer to ensure that she has a pair of each color?

- A. 3
- B. 5
- C. 7
- D. 9
- E. 10

[Reveal Solution](#)[Discussion](#)

Which of the following fractions are correctly placed from the least in value to the greatest in value?

- A. $\frac{1}{4}$, $\frac{17}{25}$, $\frac{3}{4}$, $\frac{11}{16}$
- B. $\frac{17}{25}$, $\frac{1}{4}$, $\frac{11}{16}$, $\frac{3}{4}$
- C. $\frac{1}{4}$, $\frac{17}{25}$, $\frac{11}{16}$, $\frac{3}{4}$
- D. $\frac{1}{4}$, $\frac{17}{25}$, $\frac{3}{4}$, $\frac{11}{16}$
- E. $\frac{3}{4}$, $\frac{17}{25}$, $\frac{11}{16}$, $\frac{1}{4}$

[Reveal Solution](#)[Discussion](#)

$1.75 \times 10^5 =$

- A. 175,000
- B. 17,500
- C. 1,750
- D. 0.00175
- E. 0.000175

Reveal Solution

Discussion

Question #183

Topic 2

The electric company charges 3 cents per kilowatt-hour. George used 2800 kilowatt-hours in April, 3200 kilowatt-hours in May, and 3600 kilowatt-hours in June. What was his average cost of electricity for the 3 months?

- A. \$72
- B. \$88
- C. \$96
- D. \$102
- E. \$113

Reveal Solution

Discussion

← Previous Questions

Next Questions →

Question #184

Topic 2

On a map, $\frac{1}{3}$ inch equals 15 miles. The distance between two towns on a map is $3\frac{2}{3}$ inches. How many miles are actually between the two towns?

- A. 11
- B. 16
- C. 88
- D. 132
- E. 165

[Reveal Solution](#)[Discussion](#)

Question #185

Topic 2

James invested \$4,000 at 5% interest per year; how long will it take him to earn \$200 in simple interest?

- A. 1 year
- B. 2 years
- C. 3 years
- D. 4 years
- E. 5 years

[Reveal Solution](#)[Discussion](#)

Question #186

Topic 2

A mattress store sells their stock for 15% off of retail. If someone pays cash, they take an additional 10% off of the discounted price. If a mattress's retail price is \$750, what is the price after the store discount and the cash discount?

- A. \$550.75
- B. \$562.50
- C. \$573.75
- D. \$637.50
- E. \$675.00

Reveal Solution

Discussion

Question #187

Topic 2

85% of what number is 136?

- A. 160
- B. 170
- C. 180
- D. 190
- E. 220

Reveal Solution

Discussion

Question #188

Topic 2

A building that is 150 ft tall casts a shadow of 20 feet long. At the same time a tree casts a shadow of 2 ft. How tall is the tree?

- A. 10
- B. 15
- C. 20
- D. 25
- E. 30

Reveal Solution

Discussion

Question #189

Topic 2

What is the fractional equivalent of 12.5%?

- A. $\frac{1}{4}$
- B. $\frac{2}{9}$
- C. $\frac{1}{5}$
- D. $\frac{1}{8}$
- E. $\frac{2}{7}$

Reveal Solution

Discussion

Question #190

Topic 2

What is the fraction equivalent of the shaded region in the following circle?





A. $\frac{2}{3}$

B. $\frac{3}{8}$

C. $\frac{4}{5}$

D. $\frac{3}{4}$

E. $\frac{7}{16}$

Reveal Solution

Discussion

Question #191

Topic 2

Multiply 2.345×0.023 -

A. 0.53935

B. 0.053935

C. 0.0053935

D. 10.195652

E. 101.95652

Reveal Solution

Discussion

Question #192

Topic 2

A men's basketball team won 24 games and lost 32. What is the ratio of games lost to the number of games played?

- A. 32:24
- B. 4:3
- C. 3:4
- D. 4:7
- E. 3:7

Reveal Solution

Discussion

Question #193

Topic 2

Which of the following choices is equivalent to $\frac{5}{6}$?

- A. $\frac{5}{12}$
- B. $\frac{10}{6}$
- C. $\frac{20}{30}$
- D. $\frac{15}{24}$
- E. $\frac{15}{18}$

Reveal Solution

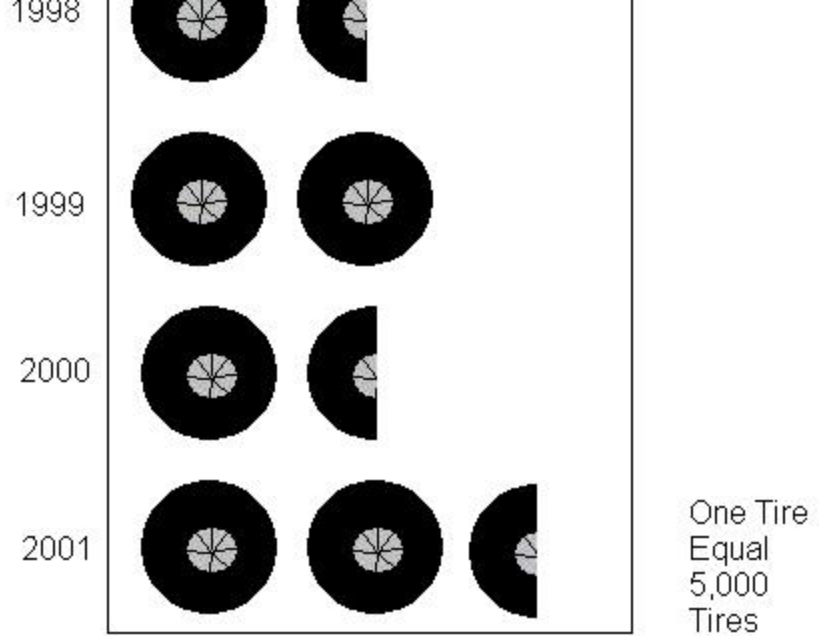
Discussion

Question #194

Topic 2

The Number of Tires Sold by XYZ Company





What was the average number of tires sold by the store from 1998 to 2001?

- A. 9,000
- B. 9,375
- C. 9,545
- D. 9,770
- E. 9,995

Reveal Solution

Discussion

Question #195

Topic 2

If one side of a square is 5 units, what is the area of the square?

- A. 10
- B. 15
- C. 20

D. 25

E. 30

Reveal Solution

Discussion

Question #196

Topic 2

If $8x + 5 = 21$, then $3x + 4 =$

A. 2

B. 5

C. 10

D. 16

E. 17

F. 275

Reveal Solution

Discussion

Question #197

Topic 2

Sarah has a 20 dollar bill and a 5 dollar bill. If she purchases two items, one for \$11.23 and the other for \$8.32, then how much money does she have left over?

A. \$3.75

B. \$5.45

C. \$6.34

D. \$7.77

E. \$8.12

Reveal Solution

Discussion

Question #198

Topic 2

How long will Lucy have to wait before for her \$2,500 invested at 6% earns \$600 in simple interest?

A. 2 years

B. 3 years

C. 4 years

D. 5 years

E. 6 years

Reveal Solution

Discussion

Question #199

Topic 2

A car dealer sells a SUV for \$39,000, which represents a 25% profit over the cost. What was the cost of the SUV to the dealer?

A. \$29,250

B. \$31,200

C. \$32,500

D. \$33,800

E. \$33,999

Reveal Solution

Discussion

Question #200

Topic 2

Find $0.12 \div 12$ -

- A. 100
- B. 10
- C. 1
- D. 0.01
- E. 0.001

Reveal Solution

Discussion

Question #201

Topic 2

Find the mode of the following list of numbers: 2, 4, 6, 4, 8, 2, 9, 4, 3, 8

- A. 2
- B. 3
- C. 4
- D. 5
- E. 6

Reveal Solution

Discussion

Question #202

Topic 2

In the fraction $3/x$, x may not be substituted by which of the following sets?

- A. {1, 2, 4}
- B. {-2,-3,-4}
- C. {1, 3, 7}
- D. {0, 10, 20}
- E. {1.8, 4.3}

Reveal Solution

Discussion

Question #203

Topic 2

There are 8 ounces in a $\frac{1}{2}$ pound. How many ounces are in $7\frac{3}{4}$ lbs?

- A. 12 ounces
- B. 86 ounces
- C. 119 ounces
- D. 124 ounces
- E. 138 ounces

Reveal Solution

Discussion

← Previous Questions

Next Questions →

Question #204

Topic 2

If the value of x and y in the fraction XZ/Y are both tripled, how does the value of the fraction change?

- A. increases by half
- B. decreases by half
- C. triples
- D. doubles
- E. remains the same

[Reveal Solution](#)[Discussion](#)

Question #205

Topic 2

What is the next number in the following pattern? 1, $1/2$, $1/4$, $1/8$, ____

- A. $1/10$
- B. $1/12$
- C. $1/14$
- D. $1/15$
- E. $1/16$

[Reveal Solution](#)[Discussion](#)

Question #206

Topic 2

Of the following units which would be more likely used to measure the amount of water in a bathtub?

- A. kilograms
- B. liters
- C. milliliters
- D. centigrams
- E. volts

Reveal Solution

Discussion

Question #207

Topic 2

If a match box is 0.17 feet long, what is its length in inches the most closely comparable to the following?

- A. $5 \frac{1}{16}$ inch highlighter
- B. $3 \frac{1}{8}$ inch jewelry box
- C. $2 \frac{3}{4}$ inch lipstick
- D. $2 \frac{3}{16}$ inch staple remover
- E. $4 \frac{1}{2}$ inch calculator

Reveal Solution

Discussion

Question #208

Topic 2

Which of the following fractions is the equivalent of 0.5%?

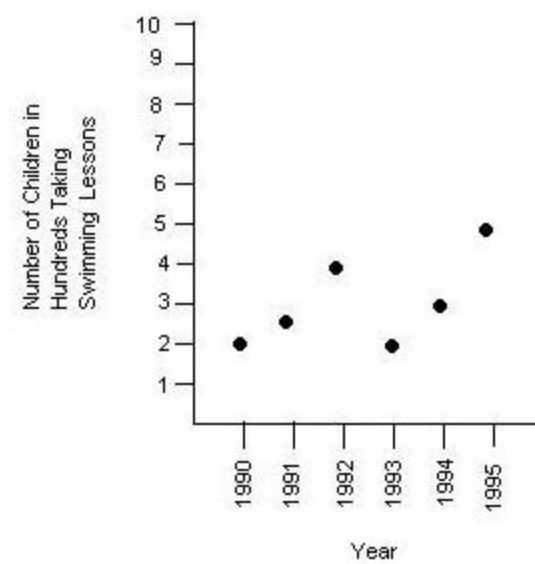
- A. $1/20$
- B. $1/200$
- C. $1/2000$
- D. $1/5$
- E. $1/500$

Reveal Solution

Discussion

Question #209

Topic 2



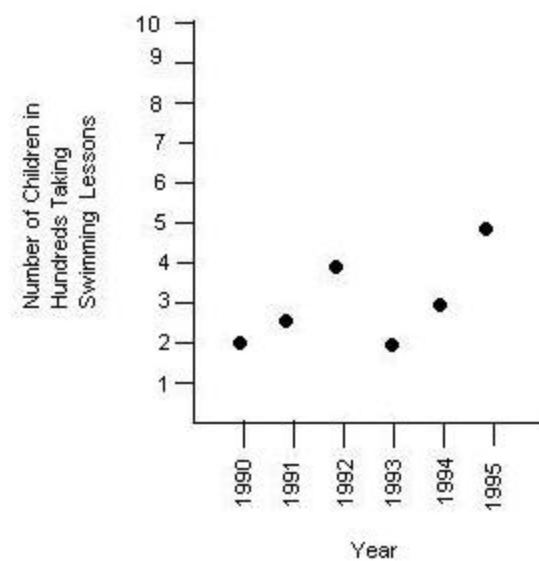
Between which year did the largest decrease in children taking swimming lessons occur?

- A. 1990-1991
- B. 1991-1992
- C. 1992-1993
- D. 1993-1994
- E. 1994-1995

[Reveal Solution](#)[Discussion](#)

Question #210

Topic 2



What was the average number of children taking swim lessons from 1990 to 1995?

- A. 250
- B. 308
- C. 385
- D. 450
- E. 1,850

[Reveal Solution](#)[Discussion](#)

Question #211

Topic 2

Which of the following is equal to 5.02×10^{22} ?

Which of the following is equal to 5.93×10^{-2} ?

- A. 0.0593
- B. 0.00593
- C. 593
- D. 5930
- E. 59300

Reveal Solution

Discussion

Question #212

Topic 2

On a Map, 1 inch represents 20 miles. The distance between 2 towns is $6 \frac{1}{5}$ inches. How many miles are actually between the two towns?

- A. 65 miles
- B. 84 miles
- C. 124 miles
- D. 138 miles
- E. 145 miles

Reveal Solution

Discussion

Question #213

Topic 2

How many cubed pieces of fudge that are 3 inches on an edge can be packed into a Christmas tin that is 9 inches deep by 12 inches wide by 8 inches high with the lid still being able to be closed?

- A. 18

B. 24

C. 32

D. 36

E. 43

Reveal Solution

Discussion 1

Question #214

Topic 2

Which of the following fractions is equal to $\frac{5}{6}$?

A. $\frac{20}{30}$

B. $\frac{15}{24}$

C. $\frac{25}{30}$

D. $\frac{40}{54}$

E. $\frac{2}{7}$

Reveal Solution

Discussion

Question #215

Topic 2

In a writing competition, the first place winner receives $\frac{1}{3}$ of the prize money. The second runner up receives $\frac{1}{4}$ of what the winner won. What was the total amount of prize money distributed if the winner receives \$6,000?

A. \$6,000

B. \$8,500

C. \$12,000

D. \$15,000

E. \$18,500

Reveal Solution

Discussion

Question #216

Topic 2

You are lying 120 ft away from a tree that is 50 feet tall. You look up at the top of the tree. Approximately how far is your hear from the top of the tree in a straight line?

A. 50 feet

B. 75 feet

C. 120 feet

D. 130 feet

E. 150 feet

Reveal Solution

Discussion

Question #217

Topic 2

A cyclist bikes x distance at 10 miles per hour and returns over the same path at 8 miles per hour. What is the cyclist's average rate for the round trip in miles per hour?

A. 8.1

B. 8.3

C. 8.6

D. 8.9

E. 9.0

[Reveal Solution](#)[Discussion](#)**Question #218***Topic 2*

If edging cost \$2.32 per 12-inch stone, and you want a double layer of edging around your flower bed that is 6 yards by 1 yard. How much will edging you flower bed cost?

- A. \$32.48
- B. \$64.96
- C. \$97.44
- D. \$129.92
- E. \$194.88

[Reveal Solution](#)[Discussion](#)**Question #219***Topic 2*

If $3x=6x-15$ then $x + 8=$

- A. 5
- B. 10
- C. 11
- D. 12
- E. 13

[Reveal Solution](#)[Discussion](#)

The number of milliliters in 1 liter is

- A. 10,000
- B. 1,000
- C. 0.1
- D. 0.01
- E. 0.001

[Reveal Solution](#)[Discussion](#)

The cost to ride on a ferry is \$5.00 per vehicle and driver with an additional cost of 50 cents per passenger. If the charge to get on the ferry is \$6.50, how many people were in the vehicle?

- A. 1
- B. 2
- C. 3
- D. 4
- E. 5

[Reveal Solution](#)[Discussion](#)

What is $\frac{1}{9}$ of 9?

- A. $\frac{1}{9}$
- B. 0
- C. 1
- D. 2
- E. 3

Reveal Solution

Discussion

Question #223

Topic 2

In his pocket, a boy has 3 red marbles, 4 blue marbles, and 4 green marbles. How many will he have to take out of his pocket to ensure that he has taken out at least one of each color?

- A. 3
- B. 7
- C. 8
- D. 9
- E. 11

Reveal Solution

Discussion

[← Previous Questions](#)

[Next Questions →](#)

Question #224

Topic 2

Which fraction is equal to 0.20%?

- A. $\frac{1}{20}$
- B. $\frac{1}{40}$
- C. $\frac{1}{50}$
- D. $\frac{1}{400}$
- E. $\frac{1}{500}$

[Reveal Solution](#)[Discussion](#)

Question #225

Topic 2

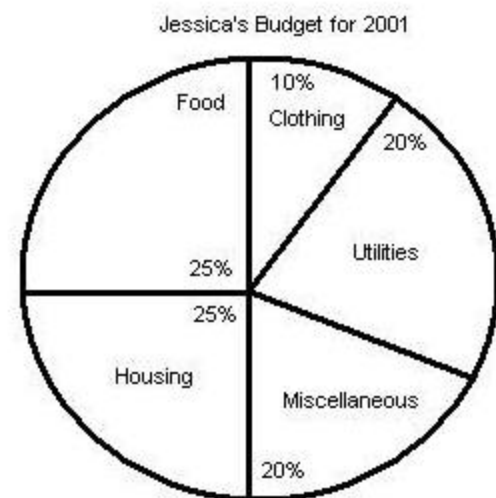
Find the missing term in the following sequence: 4, 9, 19, __, 79

- A. 36
- B. 37
- C. 38
- D. 39
- E. 40

[Reveal Solution](#)[Discussion](#)

Question #226

Topic 2



Jessica's Monthly Earnings from January 2001 to June 2001

January	\$2578
February	\$2432
March	\$2668
April	\$2490
May	\$2622
June	\$2555

If Jessica only spent 20% instead of the 25% allotment for food in May of 2001, how much did she save?

- A. \$131.10
- B. \$144.30
- C. \$148.32
- D. \$152.22
- E. \$153.33

Reveal Solution

Discussion

Question #227

Topic 2

Of the following fractions, which is less than $\frac{2}{3}$?

- A. $\frac{7}{8}$
- B. $\frac{5}{6}$
- C. $\frac{3}{4}$

C. 3/4

D. 3/5

E. 5/7

Reveal Solution

Discussion

Question #228

Topic 2

A recent study showed that an increase in body weight by 10 kilograms resulted in a 0.15% increase in heart disease. What fraction is equal to 0.15%?

A. 3/2000

B. 2/750

C. 7/4000

D. 5/3462

E. 1/500

Reveal Solution

Discussion

Question #229

Topic 2

$6.334 \times 10^4 =$

A. 0.0006334

B. 0.06334

C. 6334

D. 63340

E. 633400

[Reveal Solution](#)[Discussion](#)**Question #230***Topic 2*

Two angle in a triangle equal 120° . What is the measure of the third angle?

- A. 60°
- B. 70°
- C. 80°
- D. 90°
- E. 120°

[Reveal Solution](#)[Discussion](#)**Question #231***Topic 2*

Two angles of a triangle each measure 70° . What is the measure of the third angle in degrees?

- A. 40°
- B. 80°
- C. 100°
- D. 120°
- E. 140°

[Reveal Solution](#)[Discussion](#)

If Jack needs $2\frac{1}{2}$ pints of cream to make a dessert. How many pints will he need to make 3 desserts?

- A. $2\frac{1}{2}$
- B. 3
- C. 4
- D. 5
- E. $7\frac{1}{2}$

[Reveal Solution](#)[Discussion](#)

A discount store takes 50% off of the retail price of a desk. For the store's holiday sale, it takes an additional 20% off of all furniture. The desk's retail price was \$320. How much is the desk on sale for during the holiday sale?

- A. \$107
- B. \$114
- C. \$128
- D. \$136
- E. \$192

[Reveal Solution](#)[Discussion](#)

What is the mathematical average of the number of days in a typical year, the number of days in a week, and the number of hours in a day?

What is the mathematical average of the number of days in a typical year, the number of days in a week, and the number of hours in a day?

- A. 100
- B. 115
- C. 132
- D. 158
- E. 224

Reveal Solution

Discussion

Question #235

Topic 2

John pays \$650 in property tax. What is the assessed value of his property if property taxes are 1.2% of assessed value?

- A. \$28,800.27
- B. \$41,328.90
- C. \$43,768.99
- D. \$54,166.67
- E. \$64,333.39 D

Reveal Solution

Discussion 1

Question #236

Topic 2

A lamp is marked with a sale price of \$23.80, which is 15% off of the regular price. What is the regular price?

- A. \$26
- B. \$28

D. \$21

C. \$30

D. \$32

E. \$43

Reveal Solution

Discussion

Question #237

Topic 2

Which of the following is a true statement?

A. The product of two negative numbers is negative.

B. The product of one negative and one positive number is positive.

C. When dividing a positive number by a negative number, the results are negative.

D. When dividing a negative number by a positive number, the results are positive.

E. When dividing a negative number by a negative number the results are negative.

Reveal Solution

Discussion

Question #238

Topic 2

Change $4\frac{3}{5}$ to an improper fraction.

A. $\frac{23}{5}$

B. $\frac{7}{5}$

C. $\frac{12}{20}$

D. $\frac{20}{12}$

E. $\frac{13}{5}$

[Reveal Solution](#)[Discussion](#)

Question #239

Topic 2

The fine for a driver riding in the carpool lane without any passengers is \$133. A driver is issued a bench warrant for \$2,294.25, which includes a 15% fee for late charges and court costs. How many tickets has the driver not paid?

- A. 10
- B. 12
- C. 13
- D. 14
- E. 15

[Reveal Solution](#)[Discussion](#)

Question #240

Topic 2

Brett started a race at 6:30 A.M., and he did not cross the finish line until 1:05 P.M. How long did it take for Brett to finish the race?

- A. 6 hours and 15 minutes
- B. 6 hours and 35 minutes
- C. 7 hours and 5 minutes
- D. 7 hours and 15 minutes
- E. 7 hours and 35 minutes

[Reveal Solution](#)[Discussion](#)

Question #241

Topic 2

Jill earns \$120 for 8 hours of work. At the same pay rate, how much will she earn for 15 hours of work?

- A. \$180
- B. \$225
- C. \$245
- D. \$280
- E. \$310

Reveal Solution

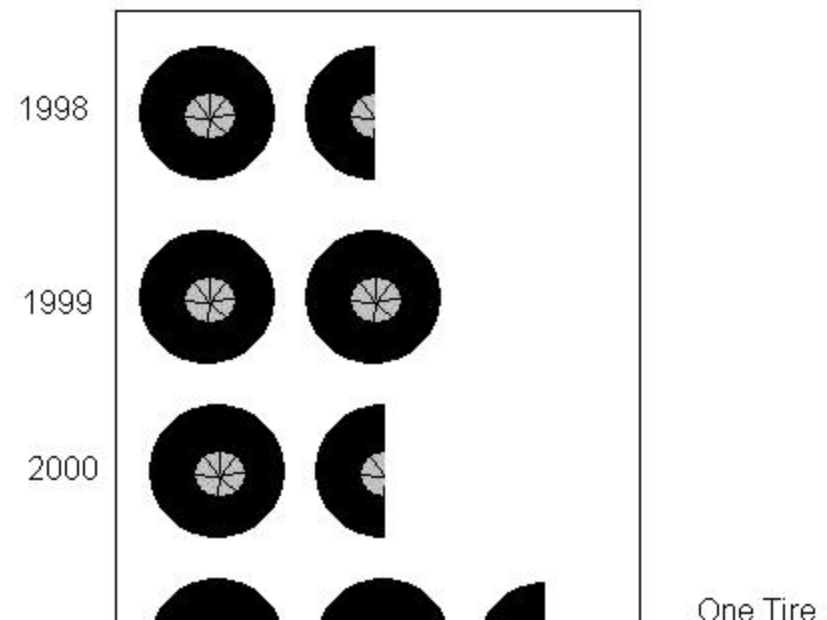
Discussion

Question #242

Topic 2

Which year did the store sell $\frac{1}{3}$ more tires than the year before?

The Number of Tires Sold by XYZ Company



One Tire

2001



Equal
5,000
Tires

- A. 1998
- B. 1999
- C. 2000
- D. 2001
- E. This did not occur during the 4 year span.

Reveal Solution

Discussion

Question #243

Topic 2

A salesman sold 20 cars in the month of July, and 40 cars the month of August. What is the percent increase in the number of cars the salesman sold?

- A. 50%
- B. 100%
- C. 150%
- D. 200%
- E. 250%

Reveal Solution

Discussion

← Previous Questions

Next Questions →

Question #244

Topic 2

In triangle ABC, $AB=BC$ and (C's measure is 65° .) What is the measure of angle B?

- A. 40°
- B. 50°
- C. 60°
- D. 65°
- E. 75°

[Reveal Solution](#)[Discussion](#)

Question #245

Topic 2

If the average arithmetic mean of 8, 12, 15, 21, x and 11 is 17 then what is x?

- A. 3
- B. 15
- C. 17
- D. 35
- E. 42

[Reveal Solution](#)[Discussion](#)

After purchasing a flat screen television for \$750, John realizes that he got a great deal on it and wishes to sell it for a 15% profit. What should his asking price be for the television?

- A. \$800.30
- B. \$833.60
- C. \$842.35
- D. \$862.50
- E. \$970.25

[Reveal Solution](#)[Discussion](#)

What is the cost in dollars to steam clean a room W yards wide and L yards long if the steam cleaners charge 10 cents per square foot?

- A. $0.9WL$
- B. $0.3WL$
- C. $0.1WL$
- D. $9WL$
- E. $3WL$

[Reveal Solution](#)[Discussion](#)

Which of the following has the least value?

- A. 0.27
- B. $\frac{1}{4}$
- C. $\frac{3}{8}$
- D. $\frac{2}{11}$
- E. 11%

[Reveal Solution](#)[Discussion](#)

$$x + y = 15$$

$$xy = 24$$

Column A - (y)

Column B - (-5)

- A. if the quantity in Column A is greater
- B. if the quantity in Column B is greater
- C. if the two quantities are equal
- D. if it is impossible to determine which quantity is greater

[Reveal Solution](#)[Discussion](#) **1**

Column A - The area of a circle with the radius of 3

Column B - The area of a semi-circle with the radius of 4

- A. if the quantity in Column A is greater
- B. if the quantity in Column B is greater
- C. if the two quantities are equal
- D. if it is impossible to determine which quantity is greater

[Reveal Solution](#)

[Discussion](#)

Question #251

Topic 2

Sarah volunteered from 9:27 A.M. until 12:45 P.M. Jan volunteered from 9:15 A.M. until 12:32 P.M.

Column A - The amount of time Sarah volunteered.

Column B - The amount of time Jan volunteered.

- A. if the quantity in Column A is greater
- B. if the quantity in Column B is greater
- C. if the two quantities are equal
- D. if it is impossible to determine which quantity is greater

[Reveal Solution](#)

[Discussion](#)

Question #252

Topic 2

If 34% of 360 equals 7.5% of h , what is h

Column A h -

Column B - 1634 -

- A. if the quantity in Column A is greater
- B. if the quantity in Column B is greater
- C. if the two quantities are equal
- D. if it is impossible to determine which quantity is greater

Reveal Solution

Discussion

Question #253

Topic 2

Column A - The fraction of 76 hours of a week

Column B - The fraction of 10 hours in a day

- A. if the quantity in Column A is greater
- B. if the quantity in Column B is greater
- C. if the two quantities are equal
- D. if it is impossible to determine which quantity is greater

Reveal Solution

Discussion

Question #254

Topic 2

Column A - 500% of 6 -

Column B - 600% of 5 -

- A. if the quantity in Column A is greater
- B. if the quantity in Column B is greater
- C. if the two quantities are equal
- D. if it is impossible to determine which quantity is greater

Reveal Solution

Discussion

Question #255

Topic 2

If $n > 0$,

Column A - $\frac{24}{25}$ of n -

Column B - 95% of n -

- A. if the quantity in Column A is greater
- B. if the quantity in Column B is greater
- C. if the two quantities are equal
- D. if it is impossible to determine which quantity is greater

Reveal Solution

Discussion

Question #256

Topic 2

5 is $\frac{2}{3}\%$ of n

Column A n -

Column B 15 -

- A. if the quantity in Column A is greater
- B. if the quantity in Column B is greater
- C. if the two quantities are equal
- D. if it is impossible to determine which quantity is greater

[Reveal Solution](#)[Discussion](#) **1**

What will it cost to carpet a room with indoor/outdoor carpet if the room is 10 feet wide and 12 feet long? The carpet costs 12.51 per square yard.

- A. \$166.80
- B. \$175.90
- C. \$184.30
- D. \$189.90
- E. \$192.20

[Reveal Solution](#)[Discussion](#)

If the perimeter of a rectangular house is 44 yards, and the length is 36 feet, what is the width of the house?

- A. 10 yards
- B. 18 yards
- C. 28 feet
- D. 32 feet
- E. 36 yards

[Reveal Solution](#)[Discussion](#)

What is the volume of a cube whose width is 5 inches?

- A. 15 cubic inches
- B. 25 cubic inches
- C. 64 cubic inches
- D. 100 cubic inches
- E. 125 cubic inches

[Reveal Solution](#)[Discussion](#)

Sally has three pieces of material. The first piece is 1 yd. 2 ft. 6 in. long, the second piece is 2 yd. 1 ft. 5 in long, and the third piece is 4 yd. 2ft. 8in long. How much material does Sally have?

- A. 7 yd. 1 ft. 8 in
- B. 8 yd. 4 ft. 4 in
- C. 8 yd. 11 in
- D. 9 yd. 7 in
- E. 10 yd

Reveal Solution

Discussion

Question #261

Topic 2

A can's diameter is 3 inches, and its height is 8 inches. What is the volume of the can?

- A. 50.30
- B. 56.55
- C. 75.68
- D. 113.04
- E. 226.08

Reveal Solution

Discussion

Question #262

Topic 2

If the area of a square flowerbed is 16 square feet, then how many feet is the perimeter of the flowerbed?

- If the area of a square flowerbed is 16 square feet, then how many feet is the perimeter of the flowerbed?
- A. 4
 - B. 12
 - C. 16
 - D. 20
 - E. 24

Reveal Solution

Discussion

Question #263

Topic 2

Once inch equals 2.54 cm, How many centimeters tall is a 76- inch man?

- A. 20 cm
- B. 29.92 cm
- C. 193.04 cm
- D. 300.04 cm
- E. 593.04 cm

Reveal Solution

Discussion

← Previous Questions

Next Questions →

Question #264

Topic 2

A room measures 11 ft x 12 ft x 9 ft. What is the volume?

- A. 1188 ft³
- B. 32 ft³
- C. 120 ft³
- D. 1300 ft³
- E. 1350 ft³

[Reveal Solution](#)[Discussion](#)

Question #265

Topic 2

A vitamin's expiration date has passed. It was suppose to contain 500 mg of Calcium, but it has lost 325 mg of Calcium. How many mg of Calcium is left?

- A. 135 mg
- B. 175 mg
- C. 185 mg
- D. 200 mg
- E. 220 mg

[Reveal Solution](#)[Discussion](#)

Question #266

Topic 2

You have orders to give a patient 20 mg of a certain medication. The medication is stored 4 mg per 5 ml dose. How many milliliters will need to be given?

- You have orders to give a patient 20 mg of a certain medication. The medication is stored 4 mg per 5-mL dose. How many milliliters will need to be given?
- A. 15 mL
 - B. 20 mL
 - C. 25 mL
 - D. 30 mL
 - E. 35 mL

Reveal Solution

Discussion

Question #267

Topic 2

You need exactly a 1680 ft³ aquarium for your fish. At the pet store you see four choices of aquariums, but the volume is not listed. The length, width, and height are listed on the box. Which of the following aquariums would fit your needs?

- A. 12 ft x 12 ft x 12 ft
- B. 13 ft x 15 ft x 16 ft
- C. 14 ft x 20 ft x 6 ft
- D. 15 ft x 16 ft x 12 ft
- E. 15 ft x 12 ft x 12 ft

Reveal Solution

Discussion

Question #268

Topic 2

One slice of bread is 80 calorie. Approximately how many calories are in 2 ½ slices of bread?

- A. 140 calories
- B. 200 calories

C. 220 calories

D. 240 calories

E. 260 calories

Reveal Solution

Discussion

Question #269

Topic 2

$$-37 < x \leq 35 ?$$

What is the sum of all integers x , such that
?

A. -73

B. -37

C. -36

D. 36

E. 37

Reveal Solution

Discussion 1

Question #270

Topic 2

The current ratio of boys to girls at a certain school is 2 to 5. If 12 additional boys were added to the school, the new ratio of boys to girls would be 4 to 9. How many boys currently attend the school?

A. 27

B. 48

C. 54

D. 72

E. 108

Reveal Solution

Discussion

Question #271

Topic 2

If 7 workers can build 7 cars in 7 days, then how many days would it take 5 workers to build 5 cars?

- A. 1
- B. 5
- C. 7
- D. 25
- E. 35

Reveal Solution

Discussion

Question #272

Topic 2

If 6 workers can build 4 cars in 2 days, then how many days would it take 8 workers to build 6 cars?

- A. $\frac{5}{3}$
- B. $\frac{9}{4}$
- C. $\frac{8}{3}$
- D. $\frac{11}{4}$
- E. $\frac{10}{3}$

- A. Option A
- B. Option B
- C. Option C
- D. Option D
- E. Option E

Reveal Solution

Discussion

Question #273

Topic 2

Bea can paint a house three times faster than Alice can paint a house. If, working together, it takes Alice and Bea 24 hours to paint a house, then how many hours would it take Bea to paint a house alone?

- A. 28
- B. 30
- C. 32
- D. 36
- E. 40

Reveal Solution

Discussion

Question #274

Topic 2

What percent of 15 is 15 percent of 1?

- A. 0.001
- B. 0.01
- C. 0.1
- D. 1

E. 10

Reveal Solution

Discussion

Question #275

Topic 2

Marge has n candies, where n is an integer such that $20 < n < 50$. If Marge divides the candies equally among 5 children, she will have 2 candies remaining. If she divides the candies among 6 children, she will have 1 candy remaining. How many candies will remain if she divides the candies among 7 children?

A. 0

B. 1

C. 2

D. 3

E. 4

Reveal Solution

Discussion

Question #276

Topic 2

If x is an integer, and $k = (x - 1)(x + 2) - (x - 1)(x - 2)$, then which of the following must be true?

A. k is odd only when x is odd.

B. k is odd only when x is even.

C. k is even only when x is even.

D. k is even only when x is odd.

E. None of the above.

Reveal Solution

Discussion

$$\frac{35^2 - 1}{k}$$

If k is an integer, and $\frac{35^2 - 1}{k}$ is an integer, then k could be each of the following, EXCEPT

- A. 8
- B. 9
- C. 12
- D. 16
- E. 17

[Reveal Solution](#)[Discussion](#)

$k = 2^a \times 3^b \times 5^c$, k is a positive integer and 225 and 216 are both divisors of k . If where a , b and c are positive integers, what is the least possible value of $a + b + c$?

- A. 4
- B. 5
- C. 6
- D. 7
- E. 8

[Reveal Solution](#)[Discussion](#) 1

What is the smallest positive integer k such that the product $1575 \times k$ is a perfect square?

- A. 7
- B. 9
- C. 15
- D. 25
- E. 63

[Reveal Solution](#)[Discussion](#)

$$3^x + 3^x + 3^x =$$

- A. 9^x
- B. 3^{x+1}
- C. 9^{3x}
- D. 3^{2x}
- E. 3^{3x}

- A. Option A
- B. Option B
- C. Option C
- D. Option D
- E. Option E

[Reveal Solution](#)[Discussion](#)

[Reveal Solution](#)[Discussion](#)

Question #281

Topic 2

$$5^n \times 4,000,000$$

If n is an integer and -
what is the least possible value of n ?

- A. 7
- B. 8
- C. 9
- D. 10
- E. 11

[Reveal Solution](#)[Discussion](#) **1**

Question #282

Topic 2

if $\sqrt[5]{x} = 6$, then $\sqrt{x^6} =$

- A. 6
- B. $\sqrt[5]{6}$
- C. 6^6
- D. 6^{18}
- E. 6^{36}

- A. Option A
- B. Option B
- C. Option C

D. Option D

E. Option E

Reveal Solution

Discussion

Question #283

Topic 2

$$\sqrt{3.8 \times 10^{25}}$$

Which of the following is the best approximation of
?

A. 1.9×10^5

B. 6.2×10^5

C. 1.9×10^{12}

D. 6.2×10^{12}

E. 1.9×10^{25}

A. Option A

B. Option B

C. Option C

D. Option D

E. Option E

Reveal Solution

Discussion

← Previous Questions

Next Questions →

Question #284

Topic 2

$$\frac{1 - \frac{1}{x+1}}{x}$$

Which of the following is equivalent to
for all values of x for which both expressions are defined?

- A. 1
- B. $x + 1$
- C. $\frac{1}{x}$
- D. $\frac{1}{x+1}$
- E. $x^2 + x$

- A. Option A
- B. Option B
- C. Option C
- D. Option D
- E. Option E

[Reveal Solution](#)[Discussion](#)

Question #285

Topic 2

$$\frac{2x^2(x+3) - 2x - 6}{x^2 + 2x - 3}$$

Which of the following is equivalent to
for all values of x for which both expressions are defined?

- A. $2x^2 - 2$
- B. $2x + 2$
- C. $x + 1$
- D. $2x + 6$
- E. $x - 1$

- A. Option A
- B. Option B
- C. Option C

- C. Option C
- D. Option D
- E. Option E

Reveal Solution

Discussion

Question #286

Topic 2

$x = 3(2y - x)$, if then what is the value of y in terms of x ?

A. $\frac{x}{3}$

B. $\frac{x}{6}$

C. $\frac{2x}{3}$

D. $3x$

E. $6x$

- A. Option A
- B. Option B
- C. Option C
- D. Option D
- E. Option E

Reveal Solution

Discussion

Question #287

Topic 2

$+2xy(1+y)2y$

Which of the following is equivalent to

?

A. $xy(2y+1)^2$

B. $(2xy+1)(2xy-1)$

C. $(2x+y)^2$

D. $(x+2y)^2$

E. $y(x-2y)^2$

E. $y(x + 2z)$

A. Option A

B. Option B

C. Option C

D. Option D

E. Option E

Reveal Solution

Discussion

Question #288

Topic 2

$\frac{x}{y} = \frac{2}{5}$, if then which of the following must be true?

1. $y + x = 7$

2. $\frac{x+y}{x} = \frac{7}{2}$

3. $\frac{y^2}{x^2} = \frac{25}{4}$

A. I only

B. I and II only

C. I and III only

D. II and III only

E. I, II and III

Reveal Solution

Discussion

Question #289

Topic 2

Which of the following could be the sum of three consecutive integers?

A. 29

B. 46

C. 57

D. 92

E. 100

Reveal Solution

Discussion

Question #290

Topic 2

A group of 10 people plan to contribute equally to pay for a friend's gift that costs G dollars? If n additional people want to contribute to pay for the gift, the required contribution per person will be reduced by how many dollars?

A. $\frac{Gn}{100+10n}$

B. $\frac{10+n}{Gn}$

C. $\frac{10G+Gn}{n}$

D. $\frac{Gn+10G}{Gn-10}$

E. $\frac{10G}{n^2+10n}$

A. Option A

B. Option B

C. Option C

D. Option D

E. Option E

Reveal Solution

Discussion

Question #291

Topic 2

If x and y are integers and $2x - y = 11$, then $4x + y$ CANNOT be

A. -5

- B. 1
- C. 13
- D. 17
- E. 55

Reveal Solution

Discussion

Question #292

Topic 2

If the perimeter of a certain rectangle is 76 and its area is 360 then what is the length of its shortest side?

- A. 12
- B. 18
- C. 20
- D. 36
- E. 40

Reveal Solution

Discussion

Question #293

Topic 2

If the volume of a cube is x cubic feet and the total surface area of the cube is x square feet, then what is the total length of all the cube's edges?

- A. 24
- B. 60
- C. 72
- D. 120
- E. 144

Reveal Solution

Discussion

Question #294

Topic 2

If the area of an equilateral triangle is x square meters and the perimeter is x meters, then what is the length of one side of the triangle in meters?

- A. 6
- B. 8
- C. $4\sqrt{2}$
- D. $2\sqrt{3}$
- E. $4\sqrt{3}$

- A. Option A
- B. Option B
- C. Option C
- D. Option D
- E. Option E

Reveal Solution

Discussion

Question #295

Topic 2

If the average (arithmetic mean) of 3, 6, 10, m and n is 9, then what is the average of $m+4$ and $n-2$?

- A. 9
- B. 13
- C. 14
- D. 18
- E. 26

Reveal Solution

Discussion

Question #296

Topic 2

If the average (arithmetic mean) of a and b is 45, and the average (arithmetic mean) of b and c is 35, then $a - c =$

- A. 5
- B. 10
- C. 20
- D. 30

E. 40

Reveal Solution

Discussion

Question #297

Topic 2

If there are 16 people to choose from, what is the ratio of the number of possible 7-person committees to the number of possible 8-person committees?

A. 7:8

B. 8:7

C. 7:9

D. 8:9

E. 9:8

Reveal Solution

Discussion

Question #298

Topic 2

In how many ways can Ann, Bea, Cam, Don, Ella and Fey be seated if Ann and Bea cannot be seated next to each other?

A. 240

B. 360

C. 480

D. 600

E. 720

Reveal Solution

Discussion

Question #299

Topic 2

$p^3 q^6$

If p and q are prime numbers, how many divisors does the product have?

A. 9

- A. 9
- B. 12
- C. 18
- D. 28
- E. 36

Reveal Solution

Discussion

Question #300

Topic 2

How many positive integers less than 10,000 are there in which the sum of the digits equals 5?

- A. 31
- B. 51
- C. 56
- D. 62
- E. 93

Reveal Solution

Discussion

Question #301

Topic 2

(a, b) and $(a + k, b - 3)$

$$y = 2x - 5.$$

In the coordinate plane, the points
are on the line defined by

What is the value of?

A. $-\frac{5}{2}$

B. $-\frac{5}{3}$

C. $-\frac{3}{2}$

D. $-\frac{2}{3}$

E. $-\frac{2}{5}$

- A. Option A
- B. Option B
- C. Option C
- D. Option D
- E. Option E

Reveal Solution

Discussion 3

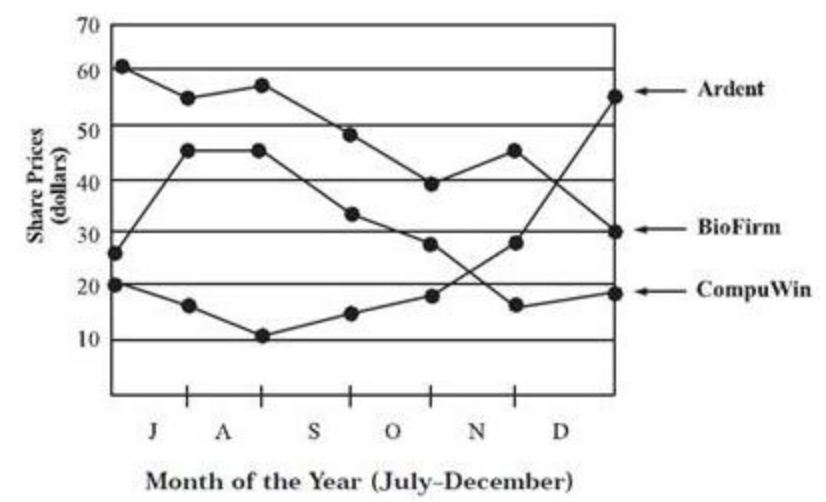
Topic 3 - Data Interpretation

Question #1

Topic 3

Refer to the following chart -

**SHARE PRICES OF COMMON STOCK
(ARDENT, BIOFIRM, AND COMPUWIN CORPORATIONS)**



During which of the following months was there a negative aggregate change in the share price of stock in all three companies?

- I. July -
- II. September -
- III. October -

- A. II only
- B. I and II only

C. I and III only

D. II and III only

E. I, II, and III

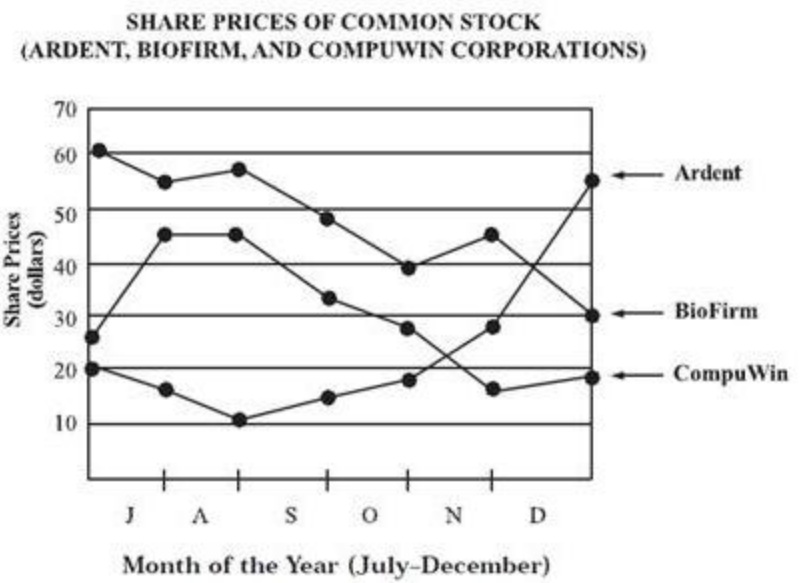
Reveal Solution

Discussion

Question #2

Topic 3

Refer to the following chart -



At the beginning of July, an investor bought 40 shares of Ardent stock, and then held all 40 shares until the end of December, at which time the investor sold all 40 shares. The investor's profit upon the sale of these 40 shares amounted to approximately

A. \$850

B. \$980

C. \$1,100

D. \$1,300

E. \$1,400

Reveal Solution

Discussion

← Previous Questions

Next Questions →

Question #3

Topic 3

Worldwide Sales of Three XYZ Motor Company
Models 2004 – 2005 Model Year

Purchaser Category	Automobile Model		
	Basic	Standard	Deluxe
U.S. institutions	3.6	8.5	1.9
U.S. consumers	7.5	11.4	2.0
Foreign institutions	1.7	4.9	2.2
Foreign consumers	1.0	5.1	0.8

Note: All numbers are in thousands.

Based on the table, which of the following does NOT describe sales of at least 10,000 automobiles?

- A. All U.S. institution sales of the standard and deluxe models
- B. All consumer sales of the basic and deluxe model
- C. All foreign institution sales
- D. All foreign sales of the standard model
- E. All institution sales of the standard model

[Reveal Solution](#)[Discussion](#)

Question #4

Topic 3

Worldwide Sales of Three XYZ Motor Company
Models 2004 – 2005 Model Year

Purchaser Category	Automobile Model		
	Basic	Standard	Deluxe
U.S. institutions	3.6	8.5	1.9
U.S. consumers	7.5	11.4	2.0
Foreign institutions	1.7	4.9	2.2
Foreign consumers	1.0	5.1	0.8

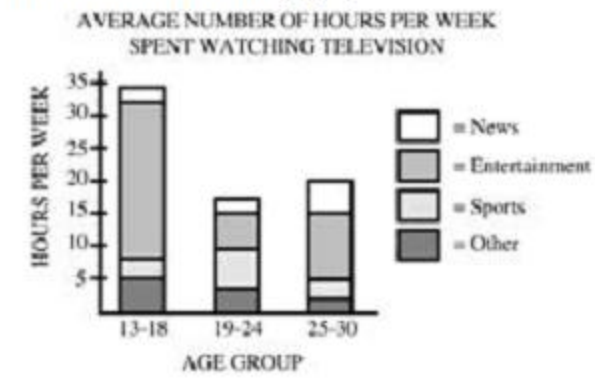
Note: All numbers are in thousands.

Assume that total revenue from sales of the standard model exceeded total revenue from sales of the basic model by \$41 million. The average sales price of a standard model exceeded the average price of a basic model by approximately

- A. \$2,500
- B. \$3,000
- C. \$3,600
- D. \$4,400
- E. It cannot be determined from the information given.

[Reveal Solution](#)[Discussion](#)

Refer to the following graph.



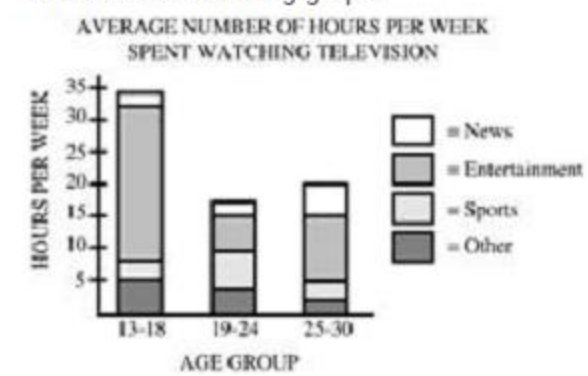
Based solely on the information in the graph, approximately how many hours per week does the average 27-year old spend watching news on television?

- A. 2
- B. 5
- C. 8
- D. 10
- E. 20

Reveal Solution

Discussion

Refer to the following graph.



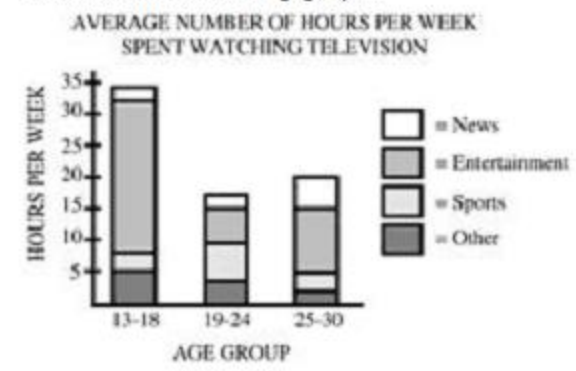
The age group that spends the greatest number of hours per week watching sports on television spends approximately what percent of its total television viewing time watching programming other than news, entertainment, or sports?

- A. 4
- B. 10
- C. 16
- D. 22
- E. 33

Reveal Solution

Discussion

Refer to the following graph.



What is the approximate ratio of the average number of hours per week that the youngest age group spends watching televised entertainment to the average number of hours per week that the other two groups combined spend watching the same type of programming?

- A. 3:4
- B. 1:1
- C. 5:4
- D. 5:3
- E. 5:2

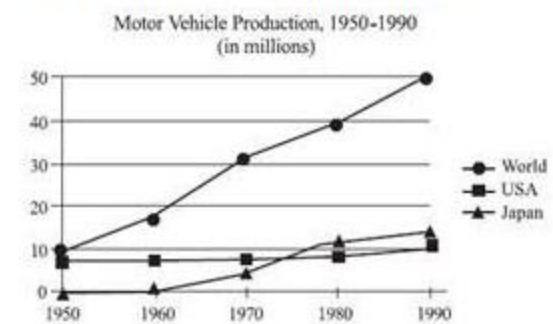
Reveal Solution

Discussion

Question #8

Topic 3

In 1980, worldwide production of motor vehicles exceeded U.S. production by approximately how many units?



- A. 38 million
- B. 35 million
- C. 30 million
- D. 27 million
- E. 19 million

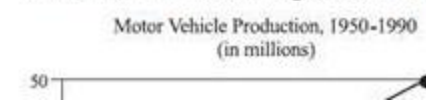
Reveal Solution

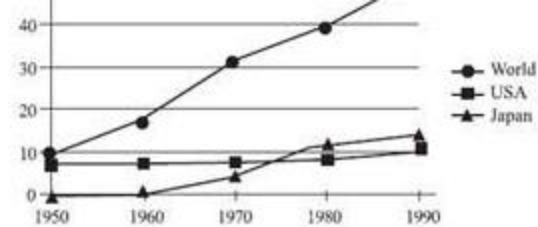
Discussion

Question #9

Topic 3

Which of the following statements about motor vehicle production from 1950 to 1990 is most accurate?





- A. As a percentage of world production, U.S. production neither increased nor decreased.
- B. Production outside the countries of U.S. and Japan increased, then leveled off, then increased again.
- C. World production increased steadily while U.S. production declined.
- D. As a percentage of world production, Japan production neither increased nor decreased.
- E. Japan production increased steadily while U.S. production declined.

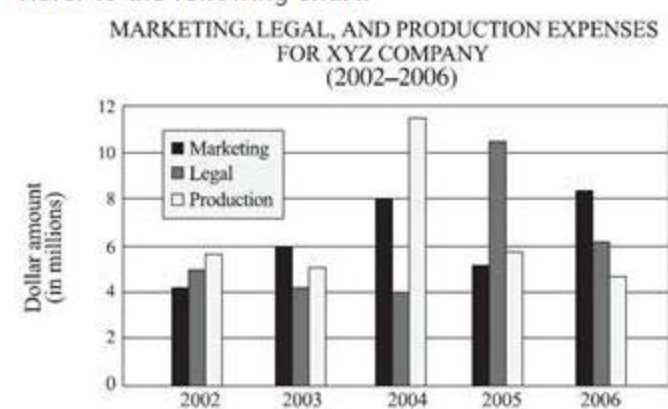
Reveal Solution

Discussion

Question #10

Topic 3

Refer to the following chart.



Among the following choices, the difference between marketing expenses and production expenses was most nearly the same for which two years?

- A. 2002 and 2003
- B. 2004 and 2006
- C. 2003 and 2005
- D. 2002 and 2004
- E. 2003 and 2006

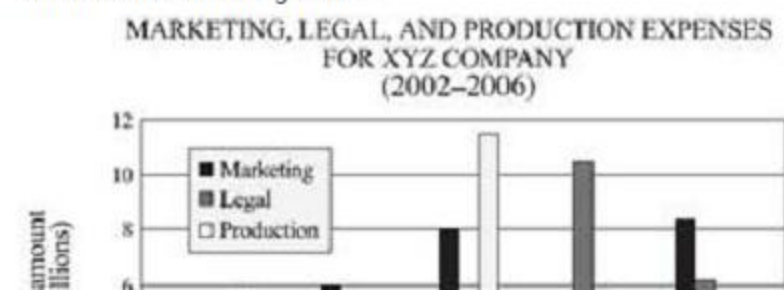
Reveal Solution

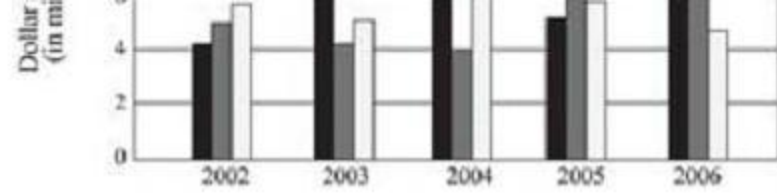
Discussion

Question #11

Topic 3

Refer to the following chart.





With respect to the two years during which combined legal and production expenses were most nearly the same, average marketing expenses per year were approximately

- A. \$5.5 million
- B. \$6.2 million
- C. \$6.8 million
- D. \$7.2 million
- E. \$8.0 million

Reveal Solution

Discussion

Question #12

Topic 3

Refer to the following chart.

Shipping Rates for Express Parcel Service, Inc.

	Shipment Method		
	Ground	Air	Express
1 pound or less	\$1.50	\$2.25	\$6.75
Each additional pound (or fraction) through 10 pounds	\$.40	\$.60	\$1.15
Each additional pound (or fraction), 11 or more pounds	\$.25	\$.40	\$.75

How much would it cost to ship a 28-pound parcel by ground delivery?

- A. \$8.80
- B. \$9.60
- C. \$9.75
- D. \$10.40
- E. \$12.05

Reveal Solution

Discussion 1

Question #13

Topic 3

Refer to the following chart.

Shipping Rates for Express Parcel Service, Inc.

	Shipment Method		
	Ground	Air	Express

1 pound or less	\$1.50	\$2.25	\$6.75
Each additional pound (or fraction) through 10 pounds	\$.40	\$.60	\$1.15
Each additional pound (or fraction), 11 or more pounds	\$.25	\$.40	\$.75

How much more would it cost to ship a parcel weighing 2.4 pounds by express delivery than by air delivery?

- A. \$2.80
- B. \$3.05
- C. \$3.60
- D. \$4.75
- E. \$5.60

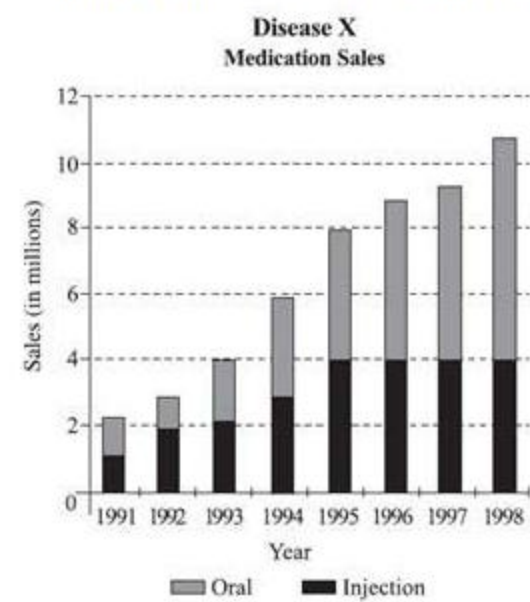
Reveal Solution

Discussion 1

Question #14

Topic 3

According to the chart, during which year were annual sales of oral medication for disease X less than during the previous year?



- A. 1992
- B. 1994
- C. 1995
- D. 1996
- E. 1997

Reveal Solution

Discussion

Question #15

Topic 3

Refer to the following table.

The month of June contains 30 days. During June, how much more electricity was used at house C per day than at house A per day, on average?

The month of June contains 30 days. During June, how much more electricity was used at house C per day than at house A per day, on average?

ELECTRICITY USAGE AT FOUR HOUSES: A, B, C, and D (Month of June)			
House	Interior Area (Square Area)	Interior Volume (Cubic Feet)	Electricity Usage in Kilowatt Hours (kWh)
A	1,300	10,400	960
B	1,500	12,000	1044
C	2,000	16,200	1,125
D	2,300	18,400	1,205

- A. 2.7 kWh
- B. 2.8 kWh
- C. 4.0 kWh
- D. 4.8 kWh
- E. 5.5 kWh

Reveal Solution

Discussion

Question #16

Topic 3

During June, which of the four houses used between 0.5 and 0.7 kWh of electricity per square foot of interior area?

ELECTRICITY USAGE AT FOUR HOUSES: A, B, C, and D (Month of June)			
House	Interior Area (Square Area)	Interior Volume (Cubic Feet)	Electricity Usage in Kilowatt Hours (kWh)
A	1,300	10,400	960
B	1,500	12,000	1044
C	2,000	16,200	1,125
D	2,300	18,400	1,205

I. House A -

II. House B -

III. House C -

IV. House D -

- A. II and III only
- B. II and IV only
- C. I, II, and III only
- D. II, III, and IV only
- E. I, II, III, and IV

Reveal Solution

Discussion

Reveal Solution

Discussion

Question #17

Topic 3

Assuming each house has a uniform ceiling height, which house has the greatest ceiling height?

- A. House A
- B. House B
- C. House C
- D. House D
- E. All four houses have the same ceiling height.

Reveal Solution

Discussion

Question #18

Topic 3

In the graph below, no axes or origin is shown. If point B's coordinates are (10,3), which of the following coordinates would most likely be A's?



- A. (17, -2)
- B. (10, 6)
- C. (6, 8)
- D. (-10, 3)
- E. (-2, -17)

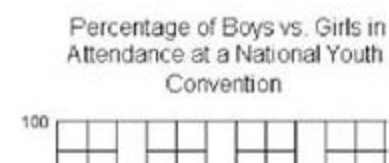
Reveal Solution

Discussion 1

Question #19

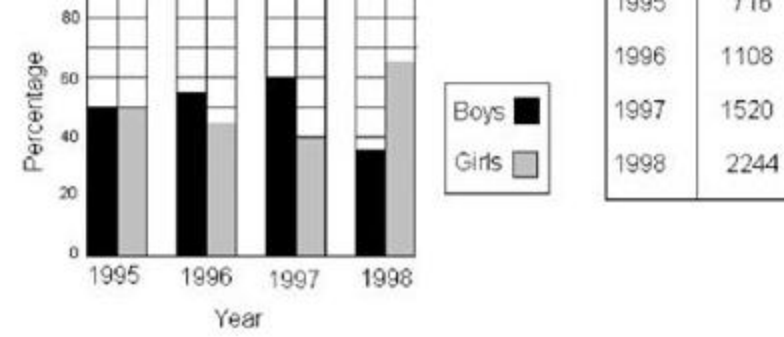
Topic 3

How many boys attended the 1995 convention?



Total Number
in Attendance
at Nation Youth
Convention

Year	Number
1995	718



- A. 358
- B. 390
- C. 407
- D. 540
- E. 716

Reveal Solution

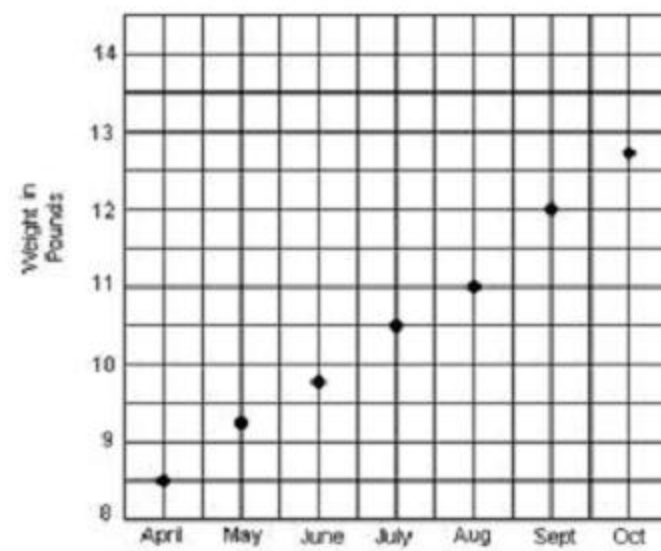
Discussion

Question #20

Topic 3

How much did the infant gain in the first month of life?

Infant Weight Gain in Pounds
Over First Six Months of Life



- A. 6 ounces
- B. 12 ounces
- C. 15 ounces
- D. 8 lbs 8 ounces
- E. 9 lbs 4 ounces

Reveal Solution

Discussion

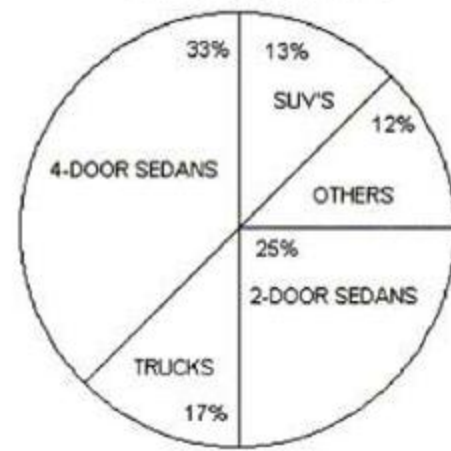
Question #21

Topic 3

If XYZ Auto Company sold 23,000 vehicles in 1999, how many were SUV's?

Percentage of Vehicle Types that XYZ

Auto Company sold in 1999



- A. 2,990
- B. 3,030
- C. 3,450
- D. 4,760
- E. 4,775

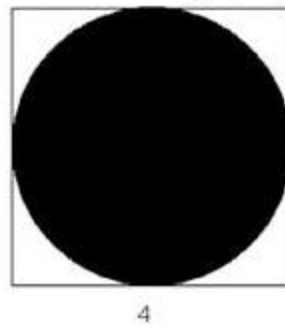
Reveal Solution

Discussion

Question #22

Topic 3

In the following figure, what is the area of the shaded circle inside of the square?



- A. 512
- B. 256
- C. 16
- D. 50.24
- E. 12.57

Reveal Solution

Discussion

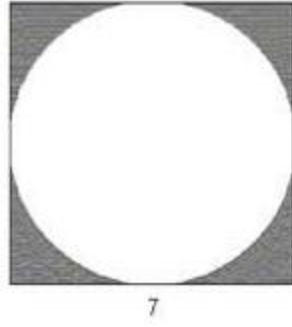
← Previous Questions

Next Questions →

Question #23

Topic 3

In the figure below, determine the area of the shaded region of the figure.



- A. 9.354
- B. 10.52
- C. 16.437
- D. 49
- E. 104.86

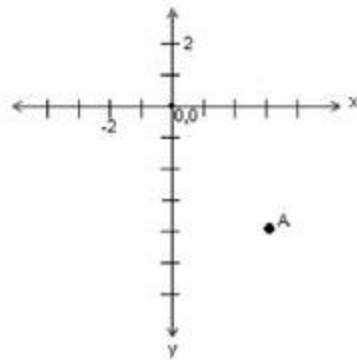
Reveal Solution

Discussion

Question #24

Topic 3

What are the coordinates of point A on the following graph?

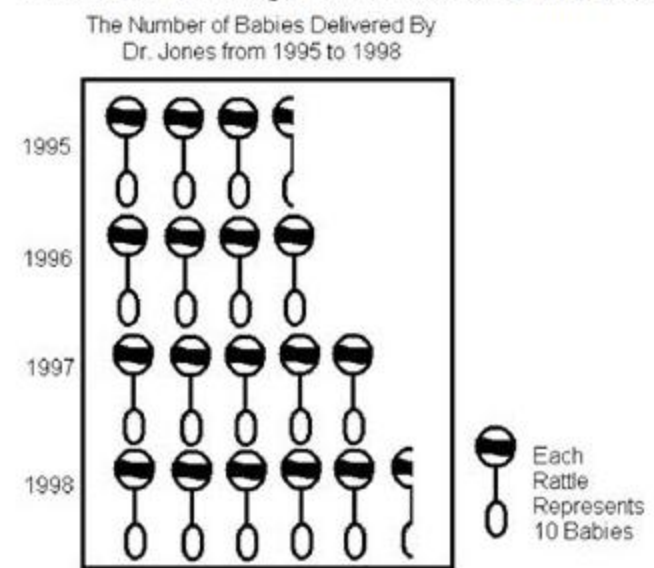


- A. (-3, -4)
- B. (-4, 3)
- C. (3, -4)
- D. (-4, -3)
- E. (3, 4)

Reveal Solution

Discussion

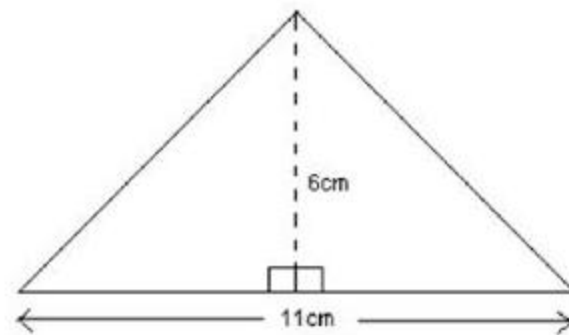
What was the average number of babies that Dr. Jones delivered each year from 1995 to 1998?



- A. 35
- B. 40
- C. 45
- D. 50
- E. 55

[Reveal Solution](#)[Discussion](#)

What is the area of the triangle below?



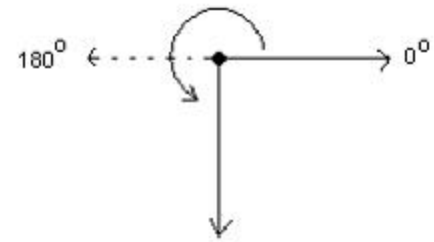
- A. 22 cm²
- B. 33 cm²
- C. 44 cm²
- D. 50 cm²
- E. 66 cm²

[Reveal Solution](#)[Discussion](#)

Question #27

Topic 3

What is the measure of the solid line angle depicted by the following figure?



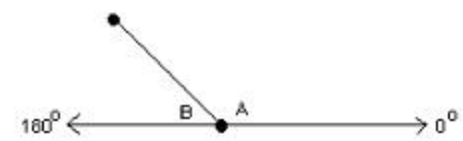
- A. 90 degrees
- B. 180 degrees
- C. 225 degrees
- D. 270 degrees
- E. 0 degrees

[Reveal Solution](#)[Discussion](#)

Question #28

Topic 3

What is the measure of angle B in the following figure if angle A measures 135?



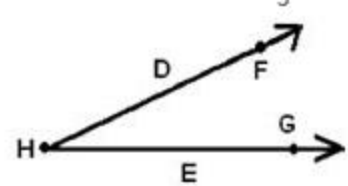
- A. 40°
- B. 45°
- C. 50°
- D. 135°
- E. 225°

[Reveal Solution](#)[Discussion](#)

Question #29

Topic 3

Which of the following letters represents the vertex in the following picture?



- A. D and E
- B. E and H
- C. F and G
- D. G only
- E. H only

Reveal Solution

Discussion

Question #30

Topic 3

What is the improper fraction or mixed number represented by the following figure?



- A. $2 \frac{1}{3}$
- B. $\frac{7}{6}$
- C. $2 \frac{5}{8}$
- D. $\frac{11}{3}$
- E. $\frac{11}{9}$ C

Reveal Solution

Discussion 1

Question #31

Topic 3

Which of the following fractions most correctly depicts the shaded area of the circle below?



- A. $\frac{3}{8}$
- B. $\frac{5}{8}$
- C. $\frac{3}{4}$

D. 5/1

E. 1/2

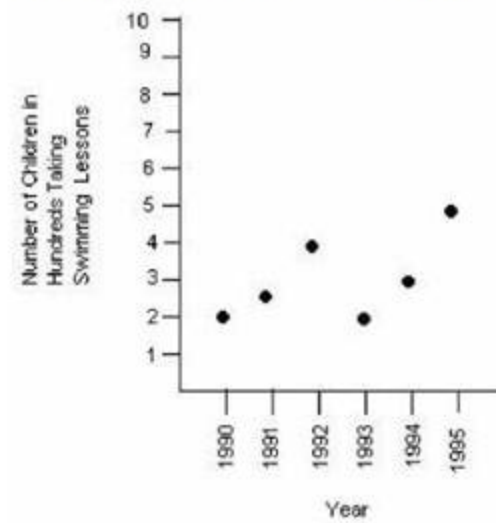
Reveal Solution

Discussion

Question #32

Topic 3

Which year did the most children take swimming lessons?



- A. 1990
- B. 1991
- C. 1992
- D. 1994
- E. 1995

Reveal Solution

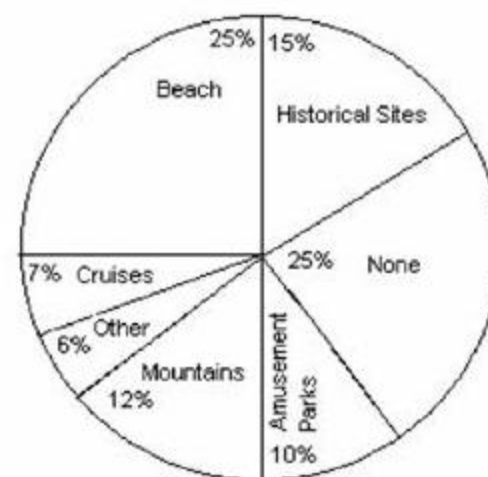
Discussion

Question #33

Topic 3

Which vacation destination is most common for the students?

Vacation Destinations for Students Attending Washington Middle School



- A. Beach
- B. Historical Sites
- C. Cruises
- D. Mountains
- E. Other

Reveal Solution

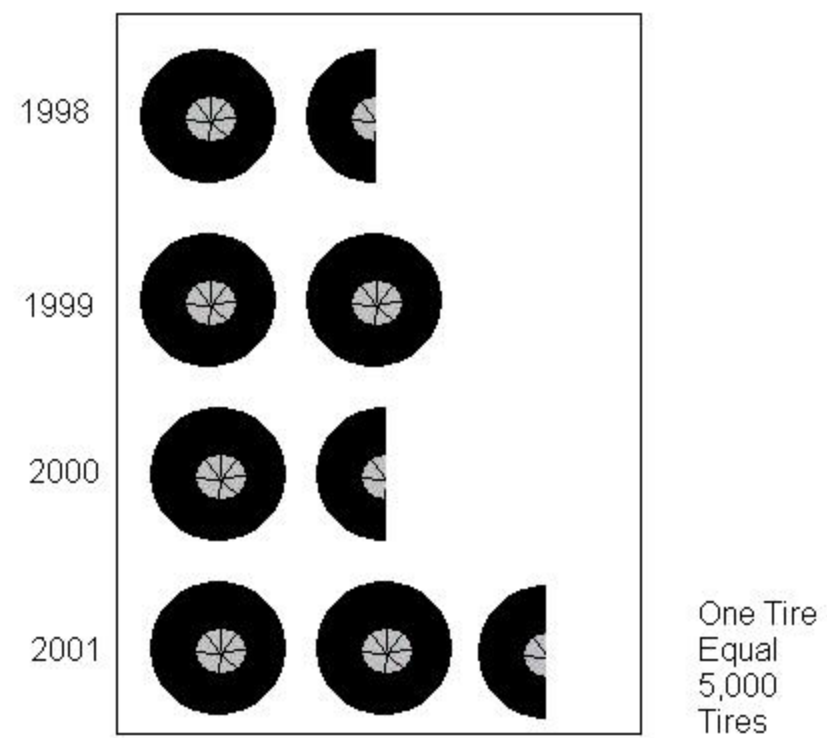
Discussion

Question #34

Topic 3

Which two years were the least number of tires sold?

The Number of Tires Sold by XYZ Company



- A. 1998 and 1999
- B. 1998 and 2000
- C. 1998 and 2001
- D. 1999 and 2000
- E. 2000 and 2001

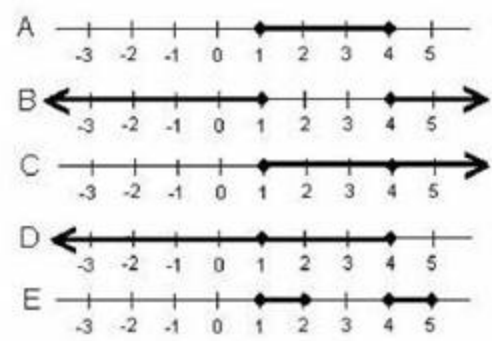
Reveal Solution

Discussion

Question #35

Topic 3

Which of the following is a correct graph of $x > 1$, $x < 4$?



- A. Line A
- B. Line B
- C. Line C
- D. Line D
- E. Line E

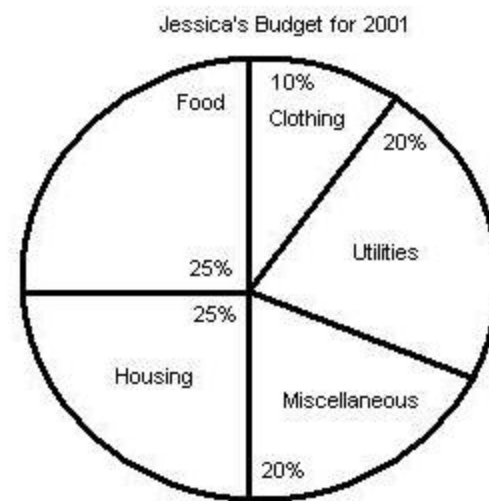
Reveal Solution

Discussion

Question #36

Topic 3

How much money did Jessica's budget allow for housing in April of 2001?



Jessica's Monthly Earnings from January 2001 to June 2001

January	\$2578
February	\$2432
March	\$2668
April	\$2490
May	\$2622
June	\$2555

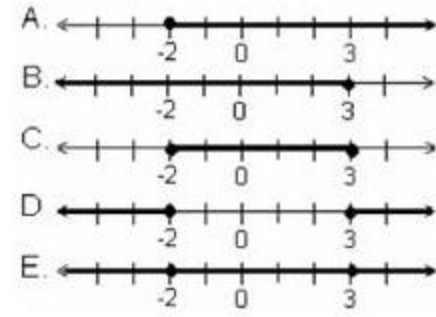
- A. \$617.80
- B. \$620.92
- C. \$622.50
- D. \$626.38
- E. \$633.20

Reveal Solution

Discussion

$$x \geq 3 \text{ and } x \leq -2$$

Which of the following is the correct graph for ?

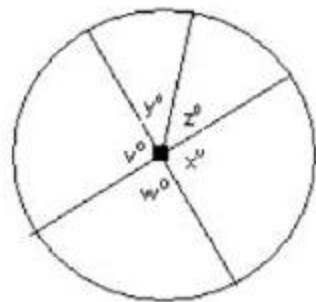


- A. Line A
- B. Line B
- C. Line C
- D. Line D
- E. Line E

[Reveal Solution](#)
[Discussion](#)

Column A -The average (arithmetic mean) of $v, w, x,$ and z

Column B 70 -



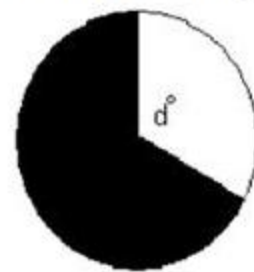
- A. if the quantity in Column A is greater
- B. if the quantity in Column B is greater
- C. if the two quantities are equal
- D. if it is impossible to determine which quantity is greater

[Reveal Solution](#)
[Discussion](#)

The shaded area in the below figure is 65% of the area of the entire circle, what is the value of d ?

Column A - d -

Column B - 126 degrees -

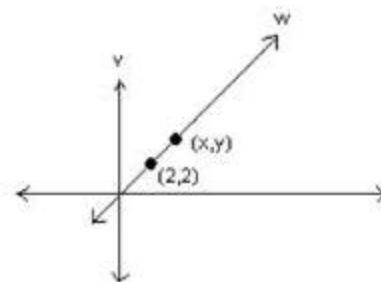


- A. if the quantity in Column A is greater
- B. if the quantity in Column B is greater
- C. if the two quantities are equal
- D. if it is impossible to determine which quantity is greater

[Reveal Solution](#)[Discussion](#)

Column A - $(x-y)$

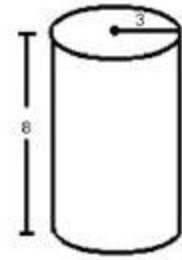
Column B - 0 -



- A. if the quantity in Column A is greater
- B. if the quantity in Column B is greater
- C. if the two quantities are equal
- D. if it is impossible to determine which quantity is greater

[Reveal Solution](#)[Discussion](#)

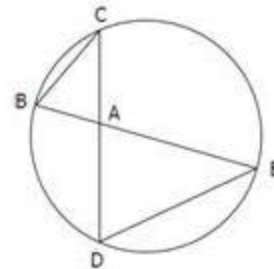
What is the volume of the following cylinder?



- A. 210.91
- B. 226.20
- C. 75.36
- D. 904.32
- E. 28.26

[Reveal Solution](#)[Discussion](#)

In the above circle $AB = 4$, $BC = 6$, $AC = 5$ and $AD = 6$. What is the length of DE ?



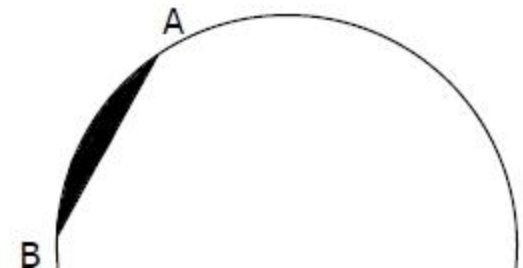
- A. 6
- B. 7.5
- C. 8
- D. 9
- E. 10


[Reveal Solution](#)[Discussion](#)

Question #43

Topic 3

In the above circle, the radius is 6 and $AB = 6$. What is the area of the shaded region?





A. $2\pi - 3\sqrt{3}$

B. $4\pi - 4\sqrt{3}$

C. $4\pi - 9\sqrt{3}$

D. $6\pi - 6\sqrt{3}$

E. $6\pi - 9\sqrt{3}$

A. Option A


B. Option B

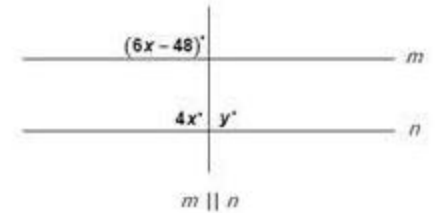
C. Option C

D. Option D

E. Option E

Reveal Solution

 Discussion



$$x + y =$$

A. 72

B. 90

C. 108

D. 120

E. 180

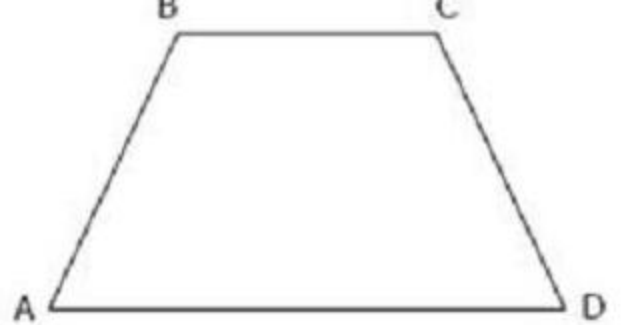
Reveal Solution

Discussion

Question #45

Topic 3

What is the area of the trapezoid above if $AB = BC = CD = 6$, and $AD = 12$?



A. $9\sqrt{2}$

B. $9\sqrt{3}$

C. $6\sqrt{6}$

D. $12\sqrt{2}$

D. $18\sqrt{2}$

E. $18\sqrt{3}$

A. Option A

B. Option B

C. Option C

D. Option D

E. Option E

[Reveal Solution](#)[Discussion](#)

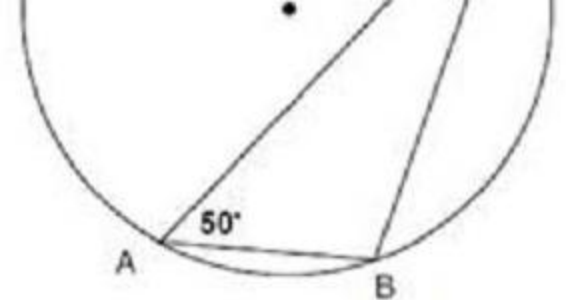
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Question #46

Topic 3

If the radius of the circle above is equal to the chord AB, then what is the value of?





A. 25

B. 30

C. 40

D. 45

E. 50

[Reveal Solution](#)

[Discussion](#)

1

[← Previous Questions](#)