



GRE KUANTITATIF

@america

Feb 29, 2020



**Dr. Meilani Hartono, S.Si., M.Pd.
(MEL)**

- Head of Primary Teacher Education
Department Bina Nusantara University

Email : mhartono@binus.edu

HP : 082122055069



For Questions 1–8, compare Quantity A and Quantity B. Some questions will have additional information above the two quantities to use in determining your answer.

1.

Quantity A

$$2^{-2} \cdot \sqrt{\frac{9}{4}}$$

Quantity B

$$\frac{2}{3} \cdot 4^{-1}$$

- A. Quantity A is greater.
- B. Quantity B is greater.
- C. The two quantities are equal.
- D. The relationship cannot be determined from the information given.

2.

$$xy = 12$$

$$\frac{\text{Quantity A}}{(3x)(2y)}$$

$$\frac{\text{Quantity B}}{60}$$

- A. Quantity A is greater.
- B. Quantity B is greater.
- C. The two quantities are equal.
- D. The relationship cannot be determined from the information given.

3.

$$\frac{\text{Quantity A}}{40\% \text{ of } \frac{5}{8}}$$

$$\frac{\text{Quantity B}}{60\% \text{ of } \frac{3}{4}}$$

- A. Quantity A is greater.
- B. Quantity B is greater.
- C. The two quantities are equal.
- D. The relationship cannot be determined from the information given.

4.

Assume $x < 0 < y$.

Quantity A

$$\frac{x}{y}$$

Quantity B

$$\frac{y}{x}$$

- A. Quantity A is greater.
- B. Quantity B is greater.
- C. The two quantities are equal.
- D. The relationship cannot be determined from the information given.

5.

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

$$5y - 2 = 2y + 1$$

Quantity A

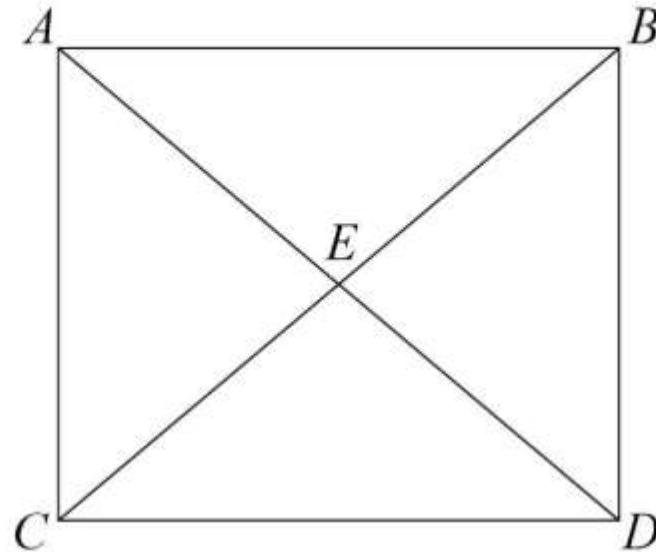
$$3x$$

Quantity B

$$6y$$

- A. Quantity A is greater.
- B. Quantity B is greater.
- C. The two quantities are equal.
- D. The relationship cannot be determined from the information given.

6.

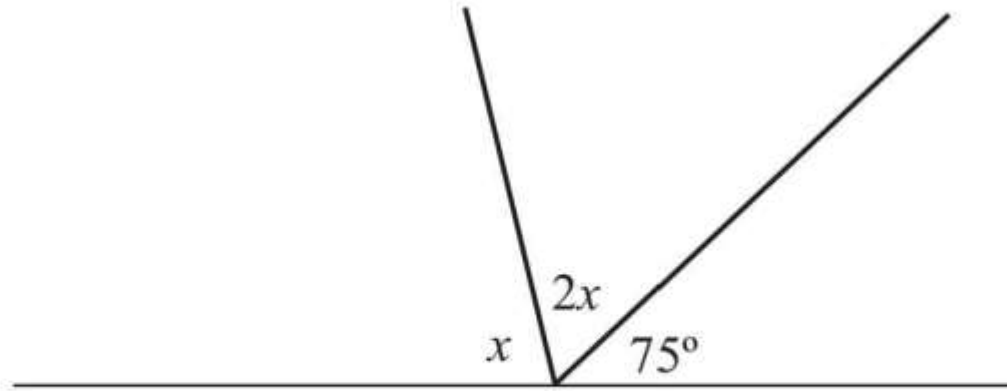


Quantity A
The area of AEC

Quantity B
The area of CED

- A. Quantity A is greater.
- B. Quantity B is greater.
- C. The two quantities are equal.
- D. The relationship cannot be determined from the information given.

7.



Quantity A

$$5x$$

Quantity B

$$180$$

- A. Quantity A is greater.
- B. Quantity B is greater.
- C. The two quantities are equal.
- D. The relationship cannot be determined from the information given.

8. A 2,475-square-foot house sells for \$475,000. The broker's fee is 6%.

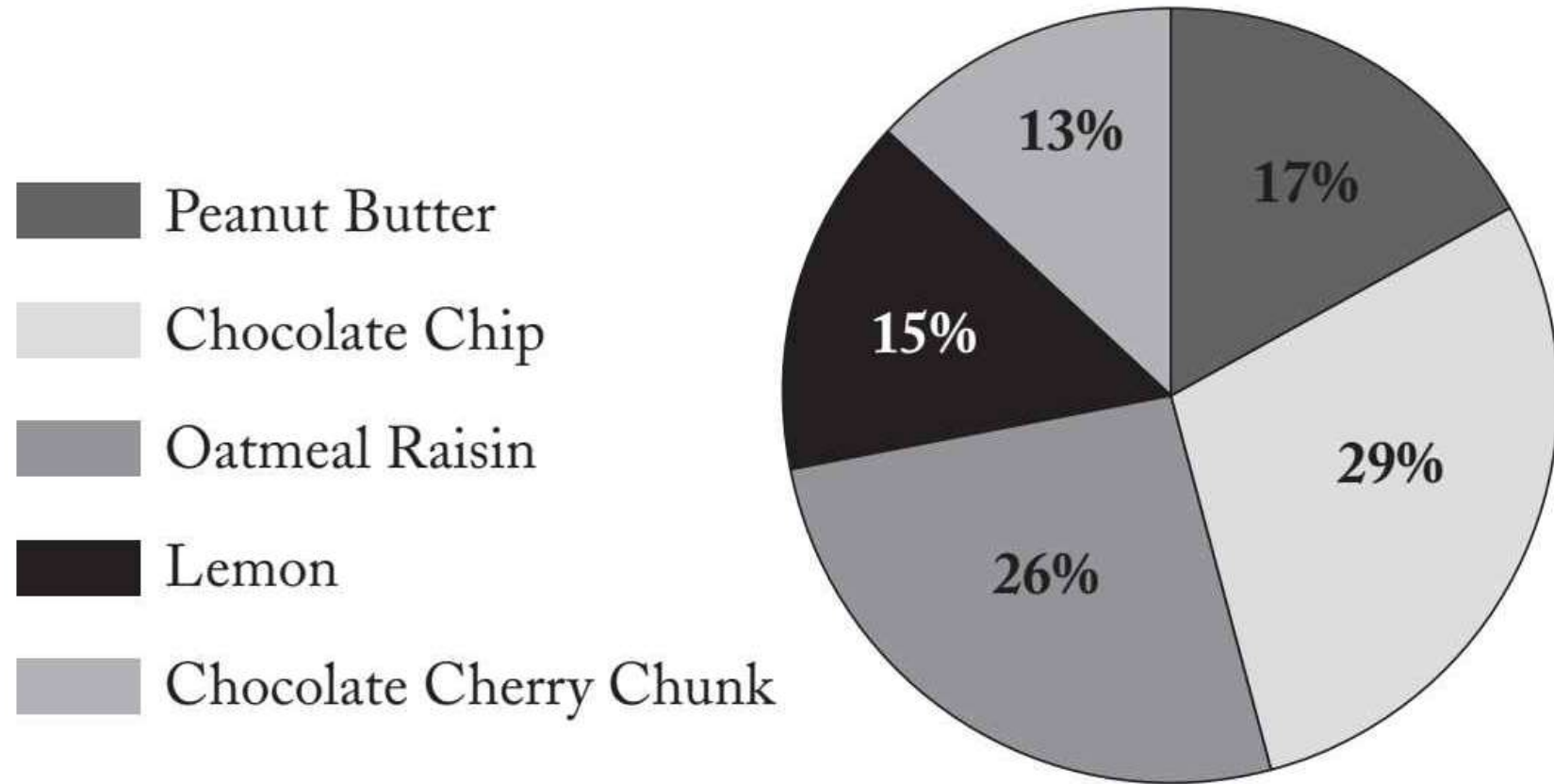
Quantity A
The broker's fee

Quantity B
\$31,000

- A. Quantity A is greater.
- B. Quantity B is greater.
- C. The two quantities are equal.
- D. The relationship cannot be determined from the information given.

Questions 9–11 refer to the chart below.

Sales by Type 2010



9. The two least popular types of cookies represent what percentage of sales?

A. 13%

B. 15%

C. 26%

D. 28%

E. 30%

10. How many different types of cookies do NOT have chocolate in them?

A. 1

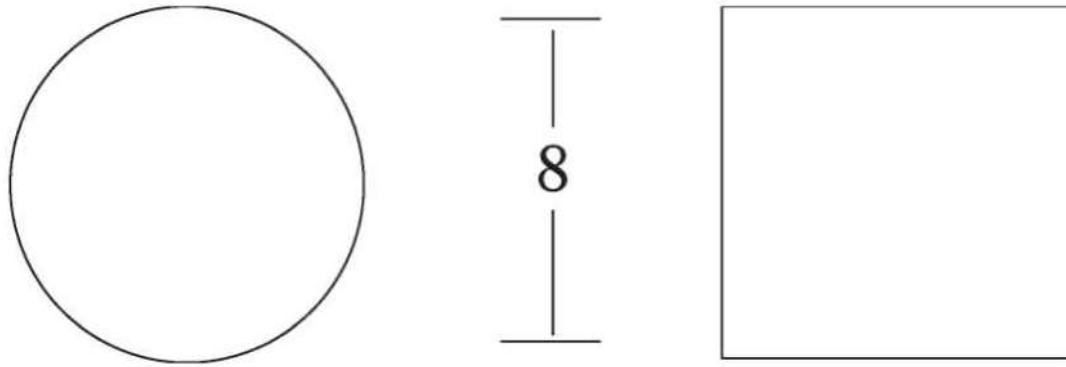
B. 2

C. 3

D. 4

E. 5

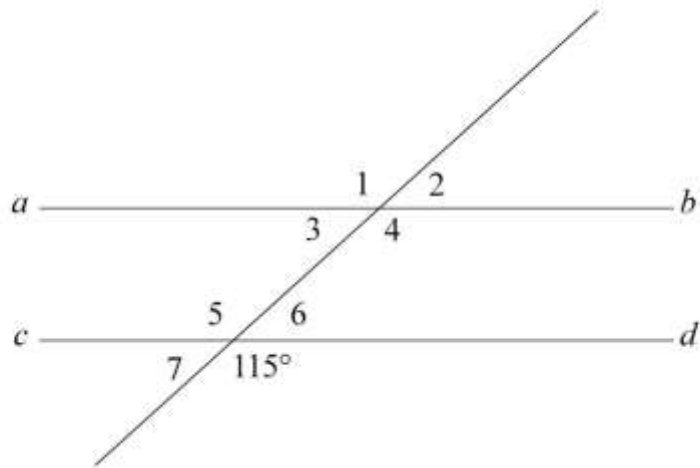
11. If total sales for the year were \$94,480, what was the total amount sold of the third most popular cookie?
- A. \$12,543
 - B. \$16,062
 - C. \$17,727
 - D. \$24,980
 - E. \$27,589



12. The above circle has a diameter of 8, and the square has a perimeter of 32. What is the difference in the area between the two?
- A. 11.82
 - B. 12.96
 - C. 13.33
 - D. 13.76
 - E. 15.97

13. Lacy receives 45% of the commission of every painting she sells. If she recently sold a painting for \$256,000 and received a commission of \$7,488, what was the total rate of commission?
- A. 0.016
 - B. 0.029
 - C. 0.065
 - D. 0.067
 - E. 0.076
14. The expression $(a - b)^2 - a(a + b)$ is equivalent to
- A. $b^2 - a^2$
 - B. $b^2 + b$
 - C. $b^2 - 2ab$
 - D. $b^2 - 3ab$
 - E. $b^2 - ab - 2a^2$

For Questions 15 and 16, indicate all the answers that apply.



15. If ab and cd are parallel, what other angles are equal to 115° ?

- A. 1
- B. 2
- C. 3
- D. 4
- E. 5
- F. 6
- G. 7

16. What are the next three numbers in the sequence 0, 1, 3, 7, 15, 31,...

- A. 57
- B. 63
- C. 72
- D. 111
- E. 127
- F. 295
- G. 255
- H. 511

For Questions, 17, 18, and 19, enter your answers in the boxes.

17. Suppose $d > 0$. If $z = \frac{4d - (d - 2d)}{2d - (d + (d - 3d))}$, what does z equal?

Give your answer as a fraction.

18. $\frac{1}{2} + \frac{1}{3} + \frac{3}{4} + \frac{5}{6} =$

Give your answer as a fraction.

19. On a rugby team of 15 players, the ratio of forwards to backs is $\frac{8}{7}$. What is the ratio of backs to total number of players?

Give your answer as a fraction.

20. If an acre is equal to 43,560 square feet, how many acres are there in 362,985 square feet?

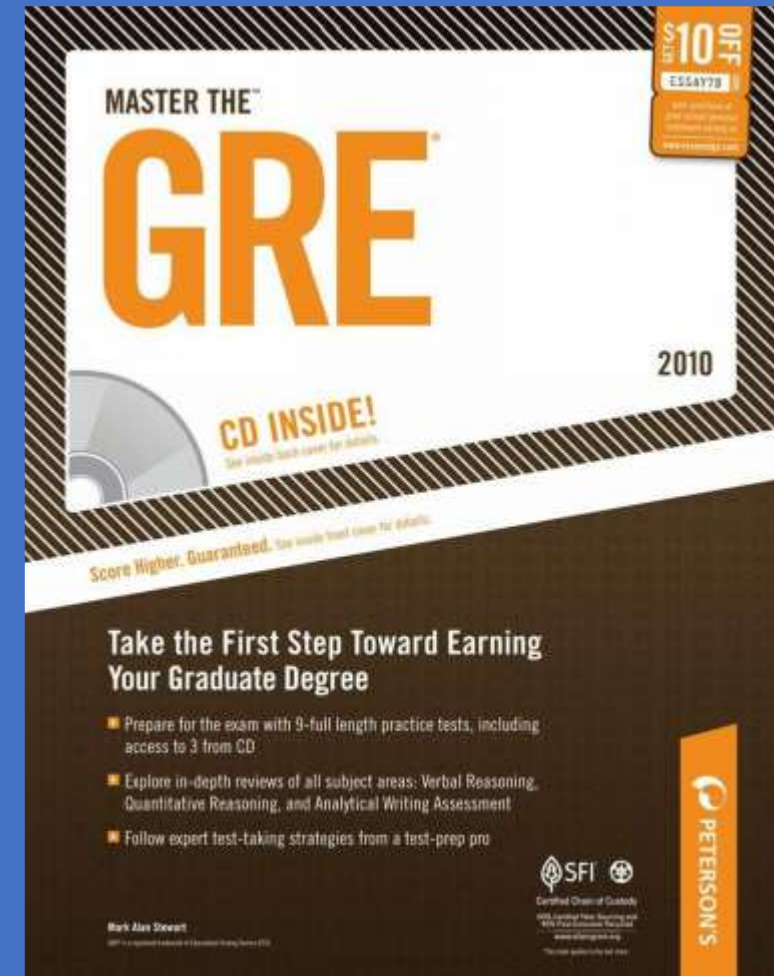
A. 6.33

B. 7.33

C. 8.33

D. 9.33

E. 10.33



1.

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

Column A

$$2 \square 2$$

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.

2.

$$0 < x < 1$$

Column A

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

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.

3. Line segments \overline{AB} and \overline{CD} are chords of circle O.

Column A

The circumference of
circle O

Column B

The length of \overline{AB} plus twice
the length of \overline{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.
4. 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) $6x + 18$

5. 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) $m + q < n + p$

6.

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.

7.

Column A

The number of prime
numbers between 10
and 15

Column B

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.

8. On the xy -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) $-\frac{1}{2}$
- (D) 2
- (E) 3

9. 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

10.

$$n = 2$$

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

Set S: $\{n, n + 1, n + 2, \dots\}$

Column A

The 25th term of Set R

Column B

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.

11.

Column A

$(9,300s)(0.0093t)$

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.

12. A farmer wants to construct a fence in order to create a rectangular horse corral 12,000 square feet in area. 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.
13. 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?

Express your answer as a decimal number.

mph

Enter a number in the box.

14. During which of the following months was there an aggregate decline in the share price of stock in all three companies?

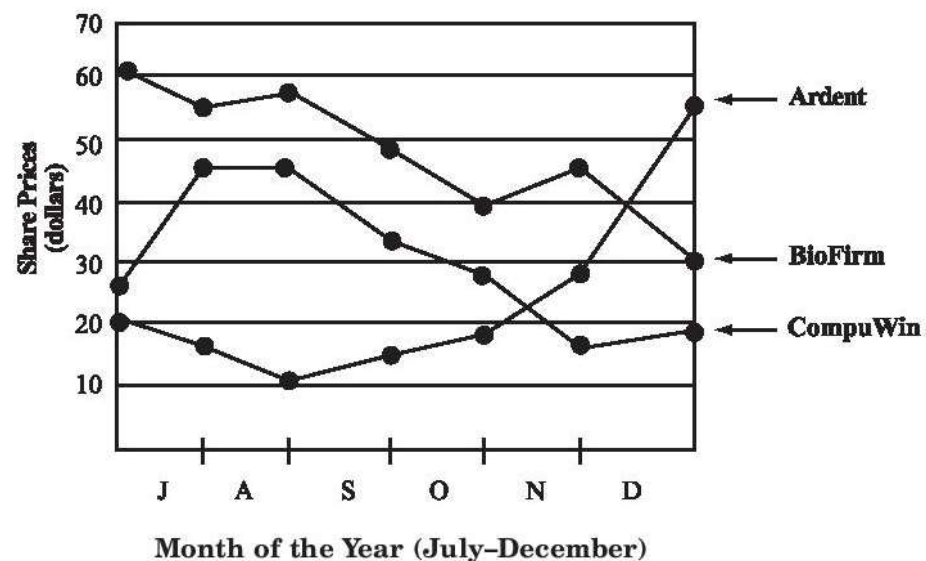
- I. July
- II. September
- III. October
- (A) II only
- (B) I and II only
- (C) I and III only
- (D) II and III only
- (E) I, II, and III

15. 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

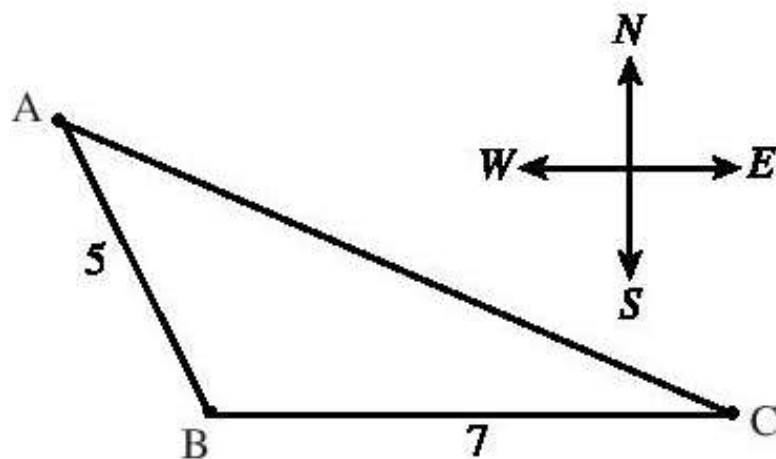
- (A) \$850
- (B) \$980
- (C) \$1,100
- (D) \$1,300
- (E) \$1,400

Questions 14 and 15 refer to the following chart.

**SHARE PRICES OF COMMON STOCK
(ARDENT, BIOFIRM, AND COMPUWIN CORPORATIONS)**



16.



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 farther west than farmhouse C, what is the total area that the crop duster sprays?

- (A) 12.5 km^2
- (B) 14 km^2
- (C) 15 km^2
- (D) 15.5 km^2
- (E) 17.5 km^2

17.

Column A

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

Column B

$$x^2 - 2$$

- (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.

18.

Column A

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

Column B

The price of a \$99 product
marked up by K 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.

19. The arithmetic mean (average) of two numbers is $P \times Q$. 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) $PQ - Q$

20. 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

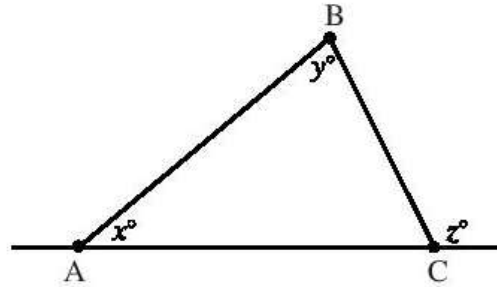
(B) $24\frac{3}{4}$

(C) $26\frac{2}{3}$

(D) 30

(E) $38\frac{2}{5}$

21.



Column A

$$x^\circ + y^\circ$$

Column B

$$z^\circ$$

- (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.

22.

$$p > 0 > q$$

Column A

$$p + q$$

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.

23.

$$\text{Distribution D} = \{3, 6, 9, 10\}$$

Column A

The range of D

Column B

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.

24. 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

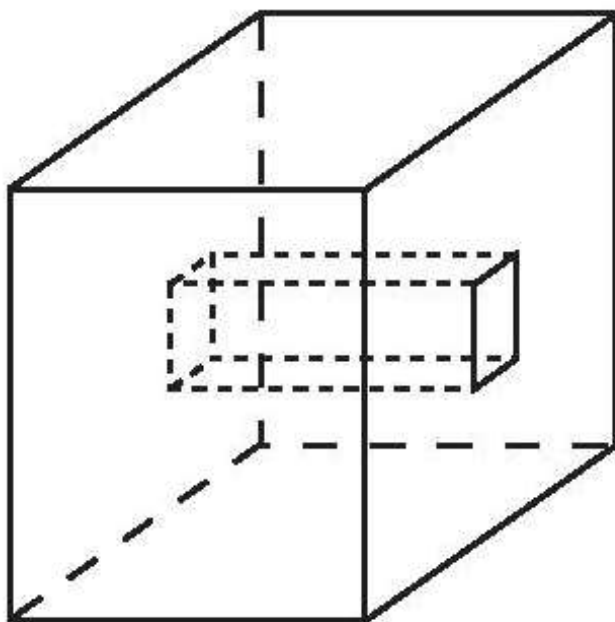
Questions 25 and 26 refer to the following table.

**Worldwide Sales of Three XYZ Motor Company Models
(2008–2009 Model Year)**

		Automobile Model		
		Basic	Standard	Deluxe
Purchaser Category	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.

25. 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
26. 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.



- 27.** 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

28.

$$x < -1$$

Column A

$$x^3 - x^2$$

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.

*Thank
you*

