

GRE KUANTITATIF

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1.

Quantity A

$$(0.03)(0.001)(0.6)$$

Quantity B

$$(1.80)(0.0001)$$

- 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.

$$a \neq 0$$

a is the reciprocal of B .

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

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

- 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.

$$\frac{\text{Quantity A}}{(\sqrt[3]{86})^2}$$

$$\frac{\text{Quantity B}}{9}$$

- 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. Amelia invests \$1,000 at a simple annual interest rate of 3%.
Margot invests \$1,200 at a simple annual interest rate of 2%.

Quantity A

Amelia's investment after 16 years.

Quantity B

Margot's investment after 12 years.

- 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. Mary is twice as old as Jay was 5 years ago. Jay is twice as old as Sue.
Altogether they are 15 years older than Mary is now.

Quantity A

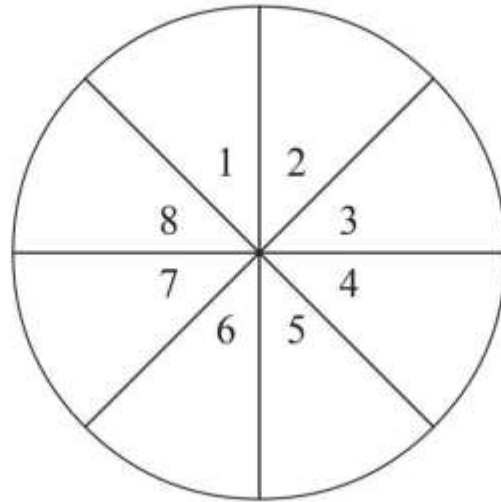
Mary

Quantity B

Jay

- 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

$$m\angle 1 + m\angle 2 + m\angle 3 + m\angle 4$$

Quantity B

$$m\angle 3 + m\angle 4 + m\angle 5 + m\angle 6$$

- 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

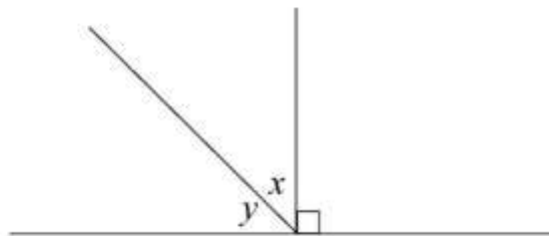
The complement of an angle A
with a measure of 21 degrees.

Quantity B

The supplement of an angle B
with a measure of 111 degrees.

- 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.



Quantity A

The mean of x and y

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.

9. What is the circumference of a circle that has area $\frac{81}{4}\pi$ square yards?
- A. $\frac{9}{4}\pi$ yards
 - B. $\frac{81}{4}\pi$ yards
 - C. $\frac{9}{2}\pi$ yards
 - D. 9π yards
 - E. $\frac{81}{2}\pi$ yards
10. A bag of cement weighs 94 pounds, and a bag of lime weighs 50 pounds. How many pounds does a shipment of 18 bags of cement and 5 bags of lime weigh?
- A. 250
 - B. 1,370
 - C. 1,442
 - D. 1,692
 - E. 1,942
11. Given $4f + 4g = 14$ and $15b + 15i = 60$, what is the mean of f , g , b , and i ?
- A. $1\frac{7}{8}$
 - B. $2\frac{1}{4}$
 - C. $8\frac{3}{5}$
 - D. $12\frac{3}{4}$
 - E. $18\frac{1}{2}$

12. Two fair six-sided dice (one blue and one yellow) with faces numbered 1, 2, 3, 4, 5, and 6 are rolled. What is the probability that both dice come to a stop on the same number?
- A. $\frac{1}{6}$
 - B. $\frac{1}{4}$
 - C. $\frac{1}{12}$
 - D. $\frac{1}{36}$
 - E. 6
13. A right triangle has a base of 12 and a hypotenuse of 13. What is the height of the remaining leg?
- A. 4
 - B. 5
 - C. 15
 - D. 20
 - E. 25
14. To manufacture soft pretzels, there is a built-in cost of \$320 to start the machines and an additional cost for materials of \$0.05 per pretzel. If the pretzels sell for 4 for \$1.00, how many have to be sold to break even for the day?
- A. 100
 - B. 160
 - C. 320
 - D. 1,600
 - E. 3,200

Questions 15–17 refer to the table below.

**Tahoe and Suburban Sales
1999–2013**

	Tahoe	Suburban
1999	72,000	70,000
2000	127,000	92,000
2001	127,000	101,000
2002	131,000	110,000
2003	126,000	137,000
2004	150,000	132,000
2005	201,000	152,000
2006	209,000	150,000
2007	197,000	132,000
2008	188,000	118,000
2009	151,000	88,000
2010	160,000	76,000
2011	148,000	83,000
2012	90,000	52,000
2013	71,000	42,000

15. What is the range of vehicles sold between 1999 and 2013?
- A. 42,000
 - B. 194,000
 - C. 167,000
 - D. 280,000
 - E. 290,000
16. If the average price of a Tahoe in 2010 was \$35,600 and the average price of a Suburban in 2010 was \$57,700, what was the total sales number in dollars for both vehicles that year?
- A. 1.00812×10^{10}
 - B. 1.65712×10^{10}
 - C. 2.65712×10^{10}
 - D. 2.98112×10^{10}
 - E. 3.12912×10^{10}

For Question 17, choose all that apply.

17. What are the mode and the median of the number of Tahoes sold between 1999 and 2013?
- A. 71,000
 - B. 127,000
 - C. 131,000
 - D. 148,000
 - E. 151,000
 - F. 180,000

18. Fernanda has 8 books in her reading list, from which she will choose 3 to take with her on vacation. How many different groups of 3 books from these 8 can she make?

A. 24

B. 56

C. 120

D. 336

E. 6,720

For Questions 19 and 20, enter your answers in the boxes.

19. A salesperson earns a 15% commission on all sales before tax. If she earns \$26,700 in one year, how much merchandise did she sell? Round to the nearest cent.

\$

20. The frequency table shown represents the ages of all the goalkeepers in a soccer league. What is the median age of the league's goalkeepers?

Goalkeeper's Age	Frequency
23	1
25	3
26	2
27	3
29	1
31	3
32	2
34	2
37	1



For Questions 1–9, compare Quantity A and Quantity B. Some questions will have additional information above the two quantities to use in determining your answer.

1.

x and y are integers.

$$x > 0$$

$$y < 0$$

Quantity A

$$x^y$$

Quantity B

$$1$$

- 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. Quantity A Quantity B
- $\frac{1}{3}$ of 12 $\frac{1}{4}$ of 16
- 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. Quantity A Quantity B
- $\frac{1}{\frac{1}{2} - \frac{1}{3}}$ $6^2 \cdot \left(\frac{1}{2} - \frac{1}{3}\right)$
- 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.

$$x^7 = -128$$

$$\frac{\text{Quantity A}}{x^5}$$

$$\frac{\text{Quantity B}}{8x^2}$$

- 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.

$$\frac{5}{16}m = \frac{1}{8}$$

$$\frac{\text{Quantity A}}{m}$$

$$\frac{\text{Quantity B}}{\frac{2}{5}}$$

- 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. Triangle ABC lies on the xy -plane with A at $(0, 0)$, B at $(4, 0)$, and C at (x, y) .

$$x, y > 0$$

$$\text{Area} = 24$$

Quantity A

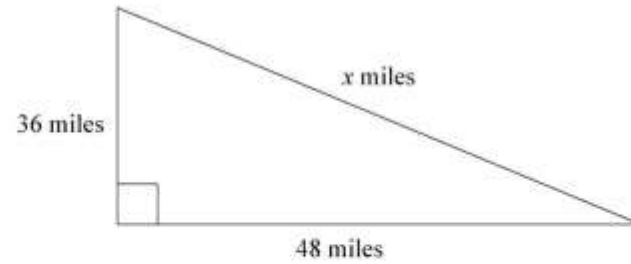
x

Quantity B

6

- 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

x

Quantity B

72

- 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.

$$x + y = 16$$

Quantity A

Maximum value of xy

Quantity B

63

- 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.

9.

$$8x = 3.2$$

$$y = 4x - 1$$

Quantity A

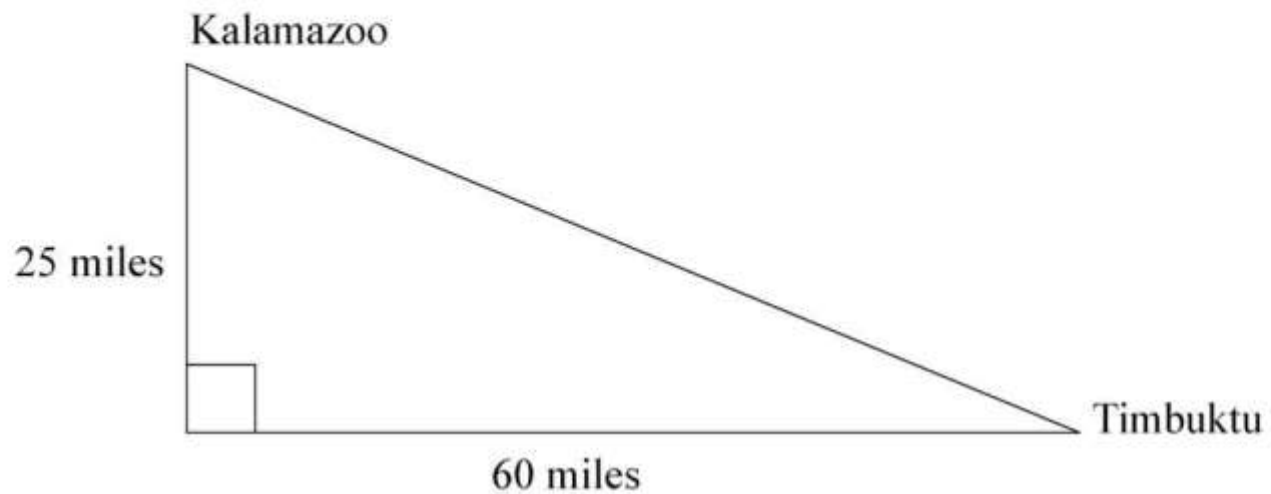
x

Quantity B

y

- 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.

10. How many miles is it from Kalamazoo to Timbuktu?



- A. 63
- B. 64
- C. 65
- D. 66
- E. 68

11. The local football booster club sells food at all home games. To make the accounting equal, they sell all products for the same price of \$1. If over the course of the season they sold 4 times as many hot dogs as candy bars, and half as many drinks as hot dogs, and they sold a total of \$1,400 worth of food, how many drinks did they sell?

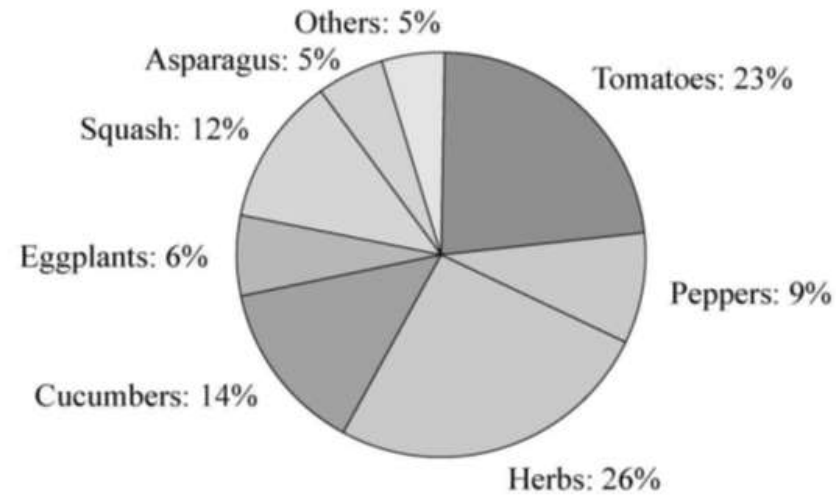
A. 200
B. 400
C. 600
D. 800
E. 1,400

12. Solve for x : $x^{-\frac{2}{3}} = 4$

A. $\frac{1}{4}$
B. 8
C. -6
D. $-\frac{8}{3}$
E. $\frac{1}{8}$

Questions 13–15 refer to the graph below.

Vegetable Plant Sales in May



13. If in May the sales of tomato plants were \$13,482, what were the sales of all the vegetable plants?
- A. \$58,617.39
 - B. \$59,871.09
 - C. \$60,740.87
 - D. \$62,137.83
 - E. \$63,820.31

14. Total vegetation sales in May were \$124,717.85. What were the total sales of cucumbers and herbs combined?

A. \$34,675.93

B. \$37,897.02

C. \$40,320.04

D. \$42,739.84

E. \$49,887.14

15. What is the ratio of squash sales to eggplant sales?

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

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

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

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

E. $\frac{6}{11}$

For Questions 16 and 17, choose all that apply.

16. Find the next three numbers in the sequence: 1, -4, 16, -64, ...

- A. -4,096
- B. -1,024
- C. -256
- D. 256
- E. 1,024
- F. 4,096

17. For which of the following defined operations does $a \Delta b$ always equal $b \Delta a$, where a and b are integers?

- A. $a \Delta b = |b - a|$
- B. $a \Delta b = a^2 - b^2$
- C. $a \Delta b = (a - b)^3$
- D. $a \Delta b = a^b$
- E. $a \Delta b = \left(\frac{1}{a} + \frac{1}{b}\right)^3$

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

- 18.** Jeff is 3 times as old as Billy, who is 2 times as old as Joe. In 7 years, their combined age will be 3 times Jeff's age now, plus 3. How old is Billy now?

- 19.** If $(x - y)^2 \times (x + y)^2 = 9$ and $x^2 = 7$, what is y^2 ?

- 20.** A pizzeria chef can produce 8 perfect pizza crusts every 5 minutes. How long does it take him to make 150 perfect pizza crusts?

Thank you!
See You Next Week!