新东方在线

GRE数学

模考1-Section 4

MAKE IT EASY

1. s = {2, 7, 9, 10, 11, 15}
A number r is to be selected at random from set S.

Quantity A: The probability that the value of $(-1)^{r^2}$ will be 1

Quantity B: $\frac{1}{2}$

2. $\frac{y}{8}=\frac{z}{16}$

Quantity A: $\frac{y+1}{4}$

Quantity B: $\frac{z+1}{8}$

3.

Quantity A: $\frac{2}{\sqrt[3]{6}}+\frac{3}{\sqrt[3]{6}}$

Quantity B: $\frac{\sqrt[3]{6}}{2}+\frac{\sqrt[3]{6}}{3}$

4. The length of each side of square *PQRS* is greater than 3. The radius of circle *C* is 3.

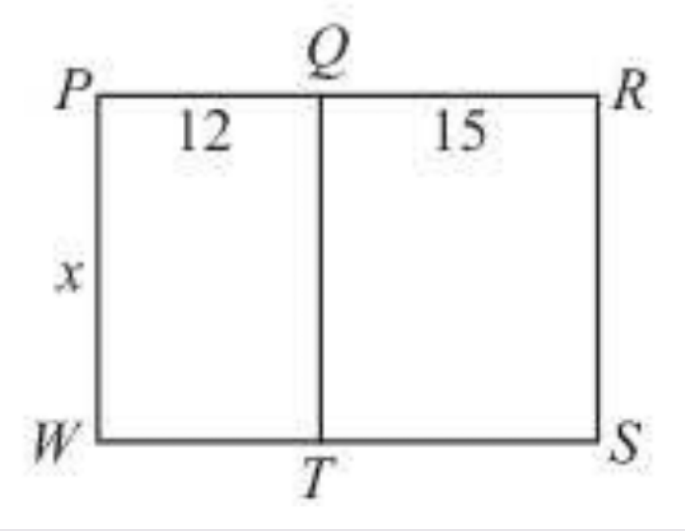
Quantity A: The area of square PQRS

Quantity B: The area of circle C

5. The ratio of *PW* to *PR* in rectangle *PRSW* is equal to the ratio of *PQ* to *QT* in rectangle *PQTW*.

Quantity A: x

Quantity B: 20



6. For 1 year, Maria invested $10,000 at a simple annual interest rate of x percent and $8,000 at a simple annual interest rate of y percent, where $x=\frac{3y}{4}$ and $y>0$.

Quantity A: The amount of interest earned on the $10,000 investment

Quantity B: The amount of interest earned on the $8,000 investment

7. The points (r, s) and (t, u) are in the *xy*-plane, where *r*, *s*, *t*, and *u* are all less than 0 and r≠t.

Quantity A: The slope of the line that passes through (r, s) and (t, u)

Quantity B: 0

8. 14.6, 12.6, 16.3, 16.2, 16.2, 17.8, 17.7, 16.0, 14.6, 12.6

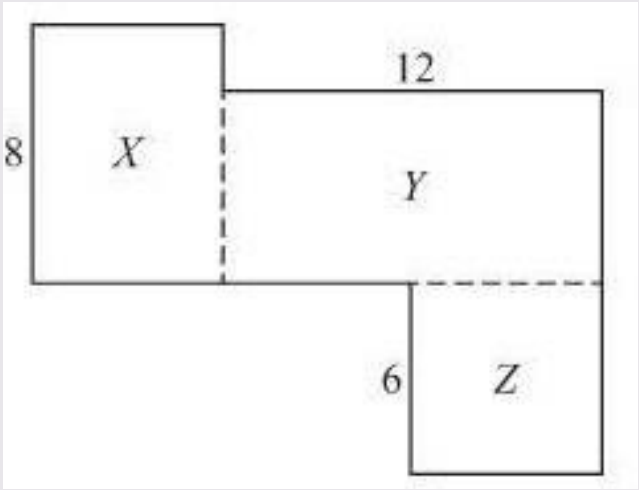
The readings of the electric meter for a certain business for each of 10 months are listed above. What is the median of the readings?

9. When measured from sea level, the height of Mountain *C* is 40 percent of the height of Mountain *D*. If the height of Mountain *C* is greater than 800 meters, which of the following values could be the height, in meters, of Mountain *D*? Indicate all such values.

10. An empty box weighs 50 ounces. The box is to be packed with at least 98 units of a certain product but not more than 102 units. If each unit weighs 0.82 ounce and the packed box weighs w ounces, then w must satisfy which of the following inequalities?

11. The integers s and t are divisible by 5. Which of the following is NOT necessarily true?

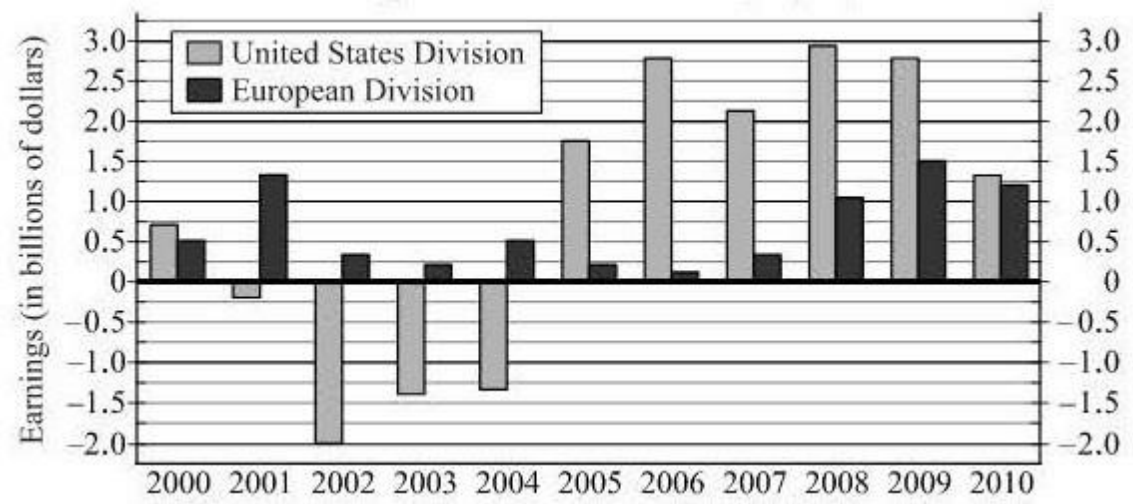
12. The figure shows some of the dimensions, in meters, of a building with eight sides. The perimeters of rectangular regions *X*, *Y*, and *Z* are 28, 34, and 22 meters, respectively. What is the perimeter of the building, in meters?



13. If $x = 3$ is a solution of the equation $x^2 + bx - 18 = 0$, where b is a constant, then the other solution is

14. For 2008 the annual earnings of the European division were approximately what percent of the combined annual earnings of the two divisions?

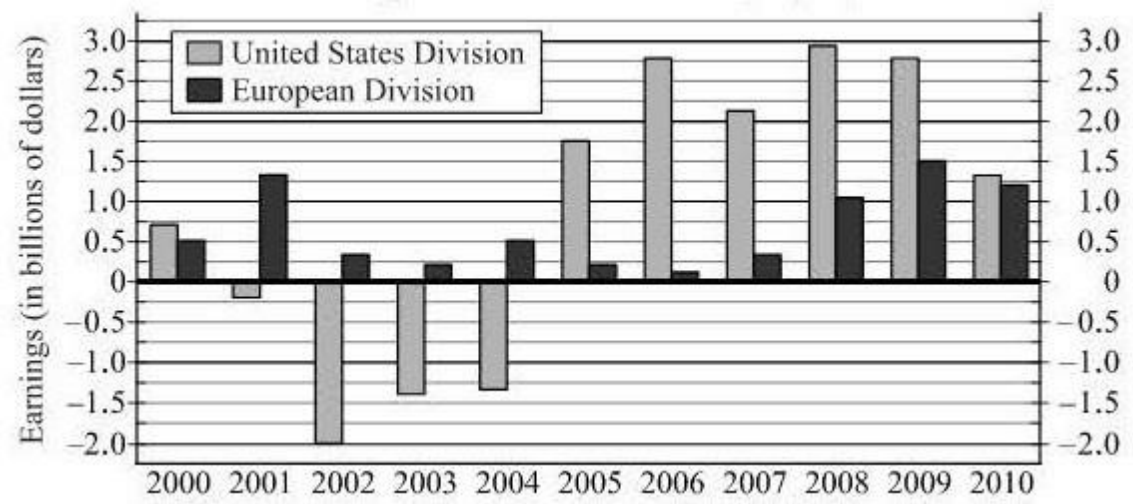
Annual Earnings of Two Divisions of Company X, 2000-2010



Note: Negative earnings are considered as losses.

15. If the annual earnings of the European division for 2009 represented 7 percent of the division's annual revenues, approximately how much were its annual revenues?

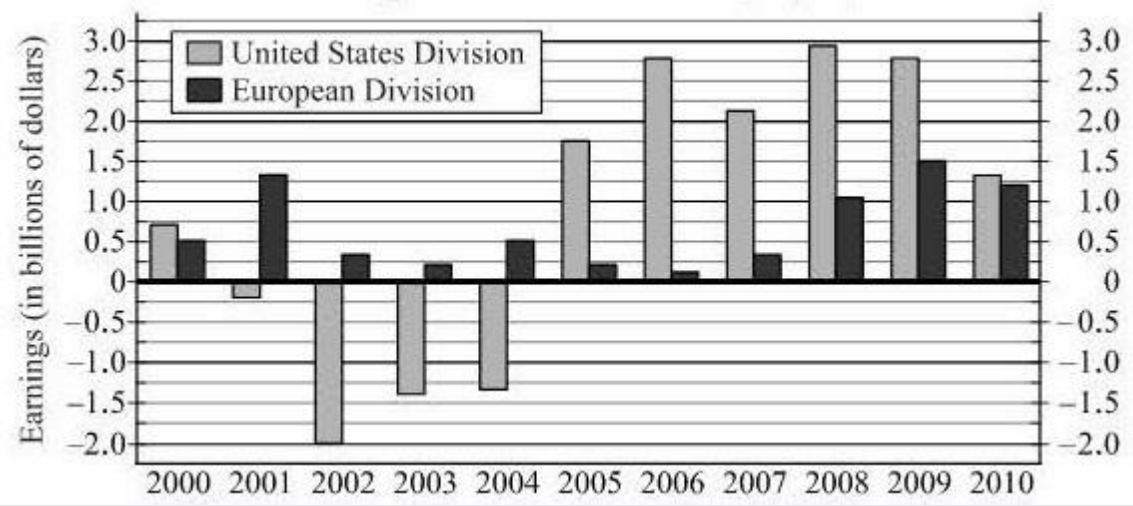
Annual Earnings of Two Divisions of Company X, 2000-2010



Note: Negative earnings are considered as losses.

16. For the years shown, the range of the annual earnings of the United States division was approximately how much greater than the range of the annual earnings of the European division?

Annual Earnings of Two Divisions of Company X, 2000-2010



Note: Negative earnings are considered as losses.

17. The average (arithmetic mean) of *w, x, y* , and *z* is equal to the average of *x, y,* and *z*. Which of the following expressions represents win terms of *x, y*, and *z*?

18. How many integers between 115 and 969 are cubes of integers?

19. The width of rectangle *T* is 25 percent greater than the width of rectangle *R*, and the length of *T* is 10 percent greater than the length of *R*. The area of *T* is what percent greater than the area of *R*?

20. If $-1 < x < 1$ and $x \neq 0$, which of the following statements must be true?

Indicate all such statements.

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Thanks

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