

GRE数学

综合练习1-Section 2

M A K E I T E A S Y

1. For the 500 measurements obtained in experiment X, the average (arithmetic mean) value is 280 and the value k is at the 75th percentile. For the 500 measurements obtained in experiment Y, the average value is 280 and the value n is at the 75th percentile.

Quantity A : k

Quantity B: n

2. Quantity A: The greater possible value of $\frac{2}{x-y}$, where $9 \leq x \leq 12$ and $-2 \leq y \leq 8$

Quantity B: 2

3. $x - y = 5$

Quantity A: $x^2 - y^2$

Quantity B: 5

4. $f(x) = 4x^2 + 28x + 49$ for all x .

Quantity A: The number b such that $f(b)$ is the minimum value of f

Quantity B: -3

5. Quantity A: $(27)^{-8}$

Quantity B: $(81)^{-6}$

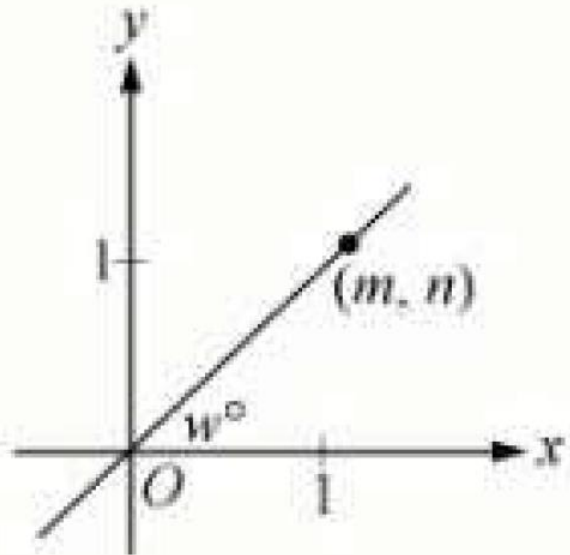
6. m and n are integers.

Quantity A: $(\sqrt{10^{2m}})(\sqrt{10^{2n}})$

Quantity B: 10^{mn}

7. Quantity A: $m+n$

Quantity B: $2m$



$$w > 45$$

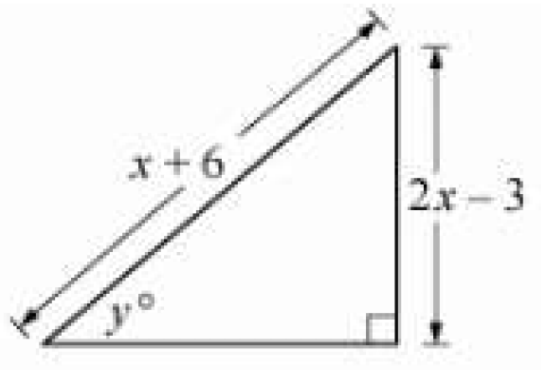
8. Company A has twice as many employees as Company B, and the two companies have no employees in common. If 64 percent of the employees of Company A are women and 52 percent of the employees of Company B are women, what percent of all the employees of the two companies are women?

9. A bookcase has s shelves with n books on each shelf, where n is a multiple of both s and $s-1$. If all of the books on the highest shelf were removed and redistributed equally among the other shelves, which of the following represents the number of books that would be on each of the other shelves?

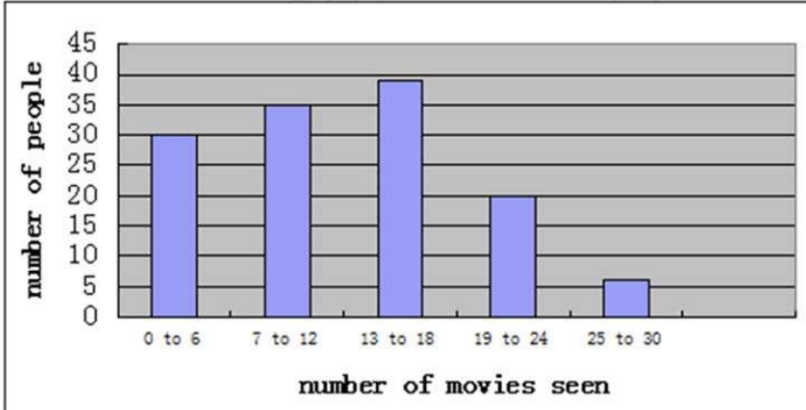
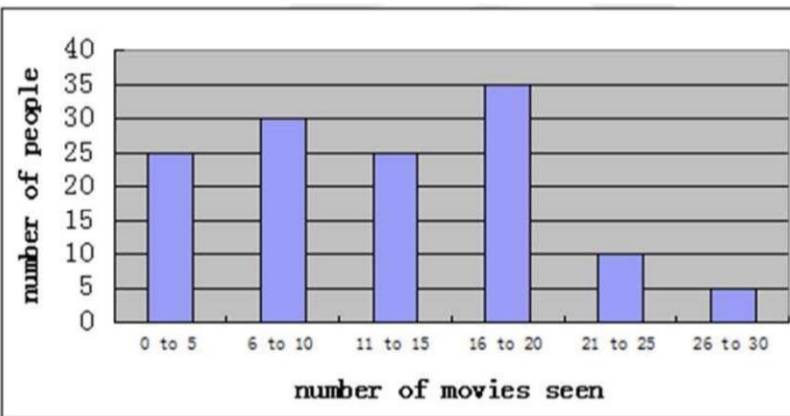
10. Which of the following pairs of integers have reciprocals whose sum is either less than $\frac{1}{3}$ or greater than $\frac{1}{2}$?

Indicate all such pairs.

11. In the triangle, is $y = 30$, then $x =$



12. In a survey, 130 people were asked how many movies they had seen in the preceding year. Their responses varied from 0 to 30 movies. The graphs above show two different summaries of the same survey results. How many people responded that they had seen 11 or 12 movies?

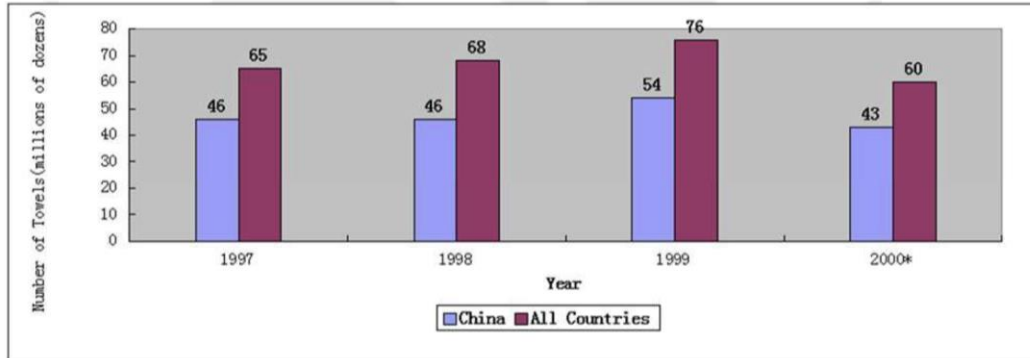


13. The width and the length of a rectangular piece of plywood are 4 feet and 8 feet, respectively. Along one edge of the plywood, a strip x inches wide and 8 feet long is removed. Then, along an edge perpendicular to the 8-foot edge, a strip x inches wide is removed. For what value of x will the remaining rectangular piece have width and length in the ratio of 2 to 5? (1 foot=12 inches)

14. In 1998, how many of the imported towels were not imported from China?

For each of the years 1997 through 2000*, the graph shows the number of towels imported to Japan from China, and the total number of towels imported to Japan from all countries, including China.

Number of Towels Imported to Japan, 1997-2000*
(in millions of dozens**)



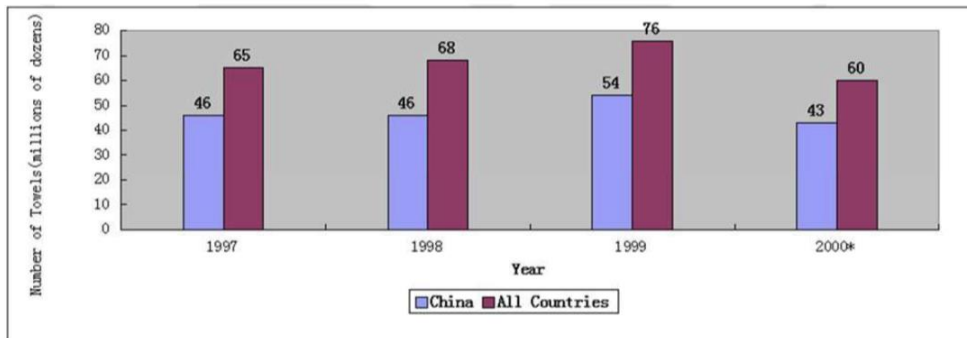
*For the first nine months of 2000

**1 dozen = 12

15. If the average (arithmetic mean) number of towels imported from China per month was the same for the last 3 months of 2000 as it was for the first 9 months of 2000, approximately how many million dozen towels were imported from China during the 12 months of 2000?

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Number of Towels Imported to Japan, 1997-2000*
(in millions of dozens**)



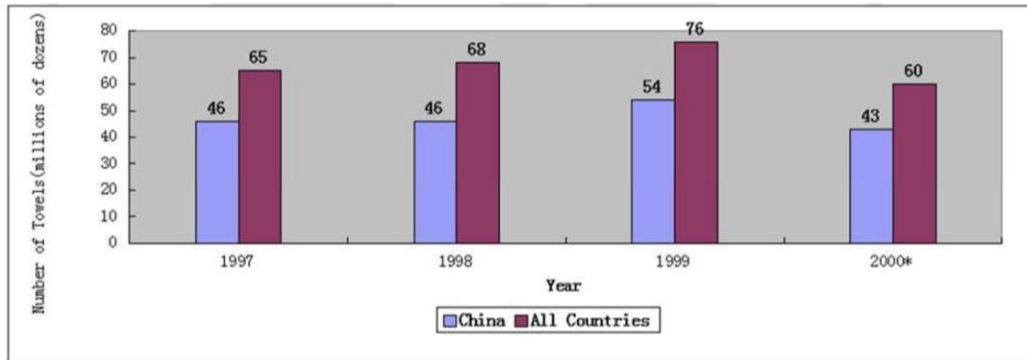
*For the first nine months of 2000

**1 dozen = 12

16. In 1999, the ratio of the number of towels imported from China to the total number of towels imported from countries other than China was closets to which of the following?

For each of the years 1997 through 2000*, the graph shows the number of towels imported to Japan from China, and the total number of towels imported to Japan from all countries, including China.

Number of Towels Imported to Japan, 1997-2000*
(in millions of dozens**)



*For the first nine months of 2000

**1 dozen = 12

17. If x is a positive integer such that the units digit of x^3 is 3, what is the units digit of x^{15} ?

$$18. \frac{60! - 59!}{58!} =$$

19. If a square region with side x and a circular region with radius r have the same area, then x must be how many times as great as r ?

20. The sum of n numbers is greater than 48. If the average (arithmetic mean) of the n numbers is 1.2, what is the least possible value of n ?

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