GRE数学

综合练习1-Section 1

MAKE IT EASY

1. A certain brand of dishwashing liquid was sold in two different bottle sizes. The small bottle was sold with $\frac{2}{5}$ as many ounces of liquid as the large bottle and was sold at a price that was $\frac{1}{2}$ the price of the large bottle.
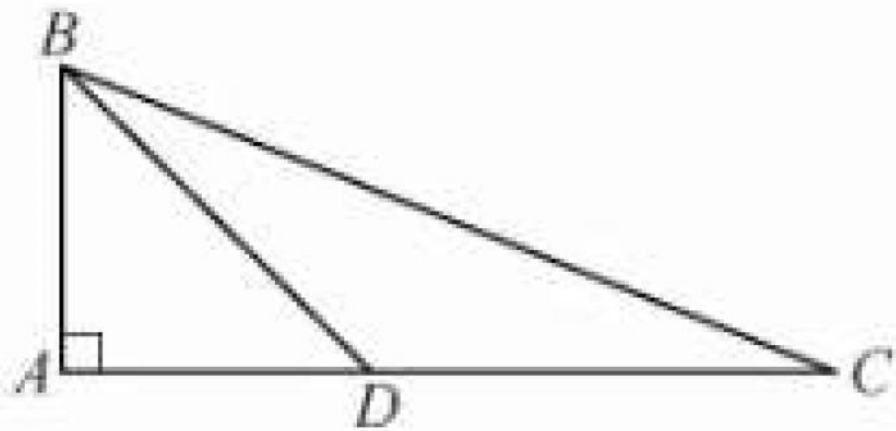
Quantity A: The price per ounce of the liquid in the small bottle

Quantity B: The price per ounce of the liquid in the large bottle

2. AB=12, AC=30, and AD= $\frac{2}{5}$(AC).

Quantity A: The measure of angle BDC
Quantity B: 120°

3. Set T consists of the integers from 11 through 100, inclusive.

Quantity A: 4 times the number of integers in set T that are multiples of 4

Quantity B: 5 times the number of integers in set T that are multiples of 5

4. $x^2+6x=7$

Quantity A: $(x+3)^2$

Quantity B: 16

5. Quantity A: The number of different prime factors of 500

Quantity B: The number of different prime factors of 360.

6. Quantity A: The area of a triangular region with perimeter 8

Quantity B: 8

7. List L consists of 7 numbers. The range of the numbers in list L is 0.

Quantity A: The average (arithmetic mean) of the numbers in list L

Quantity B: 0

8. s=|t − 2|

Quantity A: s+2

Quantity B: $|t|$

9. A jar contains exactly 10 dimes and x quarters and no other coins. If a coin is randomly selected from the jar, the probability that a quarter is selected is 0.6. What is the value of x.

10. In the rectangular coordinate system, the point (3,1) is on the circle with center (0,- 3). What is the area of the circle?
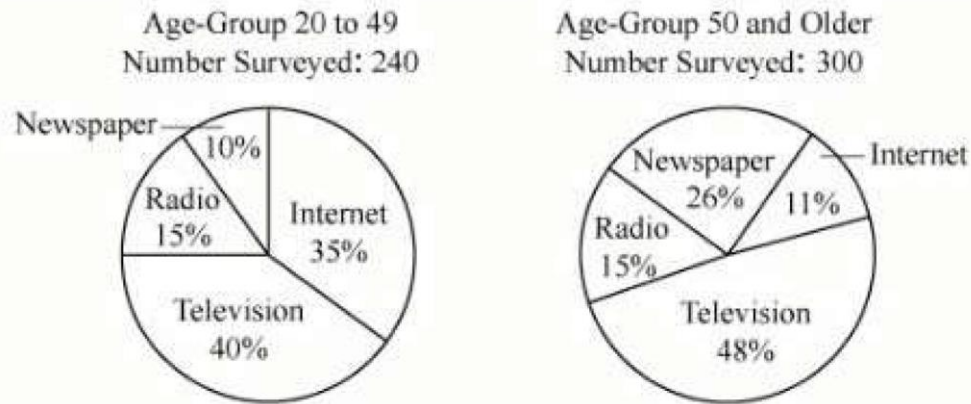
11. $(2x+1)^2 - (2x-1)^2 =$

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12. Which of the following is an equation of a line that does NOT contain any points in the xy-plane for which both coordinates are integers?

13. A veterinarian has 70 clients who own cats, dogs, or both. Of these clients, 36 own cats, including 20 clients who own both cats and dogs. Which of the following statements must be true?

Indicate <u>all</u> such statements.

14. What fraction of the people in the age-group 20 to 49 indicated newspaper or the Internet as their preferred method to obtain news?
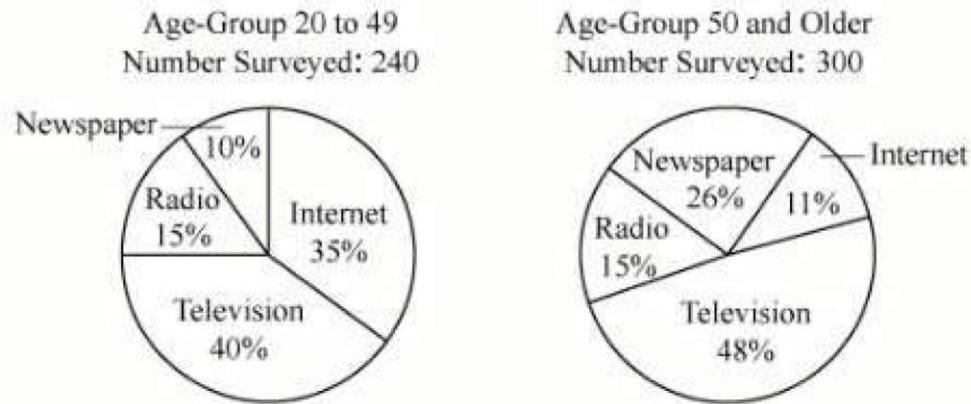
Survery* of preferred method to obtain news, by age-group

Age-Group 20 to 49
Number Surveyed: 240

Age-Group 50 and Older
Number Surveyed: 300

Newspaper — 10%
Radio 15%
Internet 35%
Television 40%

Newspaper 26%
Internet — 11%
Radio 15%
Television 48%

*Each person surveyed indicated one of the four methods as his or her preferred method to obtain news.

15. Which of the following is closest to the percent of all the people survey who indicated the Internet as their preferred method to obtain news?

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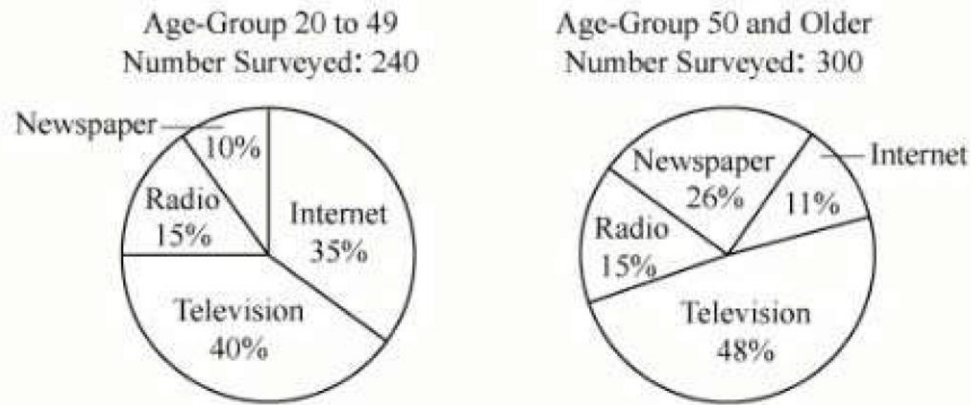
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16. For the age-group 50 and older, the number of people who indicated the Internet as their preferred method to obtain news is approximately what percent less than the number of people who indicated radio?

Survery* of preferred method to obtain news, by age-group

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Radio
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Television
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Age-Group 50 and Older
Number Surveyed: 300

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Television
48%

*Each person surveyed indicated one of the four methods as his or her preferred method to obtain news.

17. When the positive integer x is divided by 42, the remainder is 19. What is the remainder when x is divided by 7?

18. If x is 4 more than half of y and if y is 10 more than half of x, what is the value of x?

19. A pianist agreed to perform one concert at a fee 12.5 percent less than her usual fee and a second concert at a fee 20 percent greater than the first fee. The fee for the second concert was what percent greater than her usual fee?

20. The table shows the number of pages in each of 5 textbooks. What is the greatest possible value of x for which the average (arithmetic mean) number of pages of the 5 textbooks is equal to the median number of pages of the 5 textbooks?

Textbook	Numbers of Pages
A	510
B	480
C	490
D	520
E	x