Question – 1

A merchant made a profit of $5 on the sale of a sweater that cost the merchant $15. What is the profit expressed as a percent of the merchant's cost? Give your answer to the nearest whole percent.

Question – 2

Results of a Used-Car Auction are depicted in the table below

	Small Cars	Large Cars
Number of cars offered	32	23
Number of cars sold	16	20
Projected sales total for cars offered (in thousands)	$70	$150
Actual sales total (in thousands)	$41	$120

For the large cars sold at an auction that is summarized in the table above, what was the average sale price per car?

Question- 3

Quantity A	Quantity B
The least prime number greater than 24	The greatest prime number less than 28

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.

Question-4

Lionel is younger than Maria.

Quantity A   Quantity B

Twice Lionel's age   Maria's age

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.

Question-5

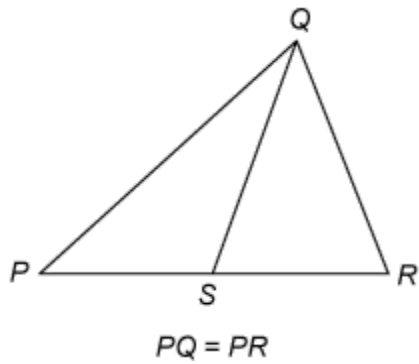Quantity A   Quantity B

54% of 360   150

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.

Question-6

Figure 1

PQ = PR

Quantity A	Quantity B
PS	SR

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.

Question-7

$y = 2x^2 + 7x - 3$

Quantity A	Quantity B
x	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.

Question-8

$y > 4$

Quantity A	Quantity B

$\dfrac{3y + 2}{5}$ 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.

Question-9

Quantity A	Quantity B

$\dfrac{2^{30} - 2^{29}}{2}$ 2^{28}

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.

Question-10

Quantity A	Quantity B
$x^2 + 1$	$2x - 1$

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.

Question-11

$w > 1$

Quantity A	Quantity B
$7w - 4$	$2w + 5$

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.

Question-12

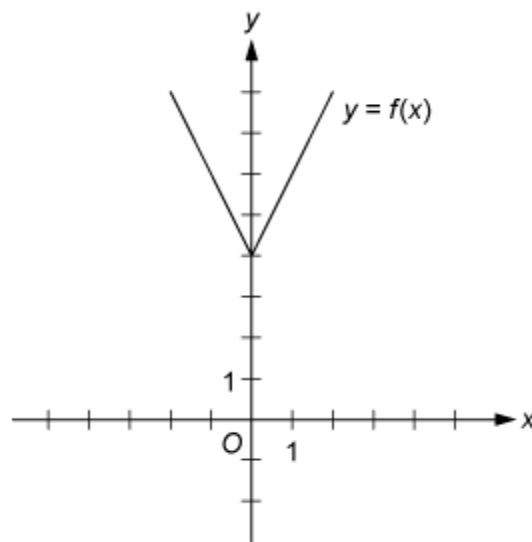If $5x + 32 = 4 - 2x$, what is the value of x ?

A. -4
B. -3
C. 4
D. 7
E. 12

Question-13

Which of the following numbers is farthest from the number 1 on the number line?

A. -10
B. -5
C. 0
D. 5
E. 10

Question-14

Figure 5

The figure above shows the graph of the function f, defined by $f(x) = |2x| + 4$ for all numbers x. For which of the following functions g, defined for all numbers x, does the graph of g intersect the graph of f?

A. $g(x) = x - 2$

B. $g(x) = x + 3$

C. $g(x) = 2x - 2$

D. $g(x) = 2x + 3$

E. $g(x) = 3x - 2$

Question-15

A car got 33 miles per gallon using gasoline that cost $2.95 per gallon. Approximately what was the cost, in dollars, of the gasoline used in driving the car 350 miles?

    A. $10
    B. $20
    C. $30
    D. $40
    E. $50

Question-16

A certain jar contains 60 jelly beans — 22 white, 18 green, 11 yellow, 5 red, and 4 purple. If a jelly bean is to be chosen at random, what is the probability that the jelly bean will be neither red nor purple?

    A. 0.09
    B. 0.15
    C. 0.54
    D. 0.85
    E. 0.91

Question-17

Which two of the following numbers have a product that is between −1 and 0?

Indicate <u>both</u> of the numbers.

    A. −20
    B. −10
    C. 2_{-4}
    D. 3_{-2}

Question-18

Which of the following integers are multiples of both 2 and 3?

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

    A. 8
    B. 9
    C. 12

D. 18

E. 21

F. 36

Question-19

Each employee of a certain company is in either Department X or Department Y, and there are more than twice as many employees in Department X as in Department Y. The average (arithmetic mean) salary is $25,000 for the employees in Department X and $35,000 for the employees in Department Y. Which of the following amounts could be the average salary for all of the employees of the company?

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

A. $26,000

B. $28,000

C. $29,000

D. $30,000

E. $31,000

F. $32,000

G. $34,000

Question-20

Which of the following could be the units digit of 57^n, where n is a positive integer?

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

A. 0

B. 1

C. 2

D. 3

E. 4

F. 5

G. 6

H. 7

I. 8

J. 9