



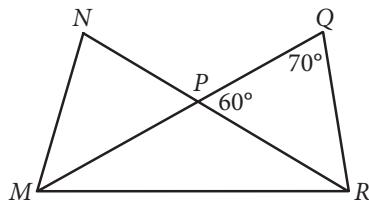
16

If $2x + 8 = 16$, what is the value of $x + 4$?

18

The number of radians in a 720-degree angle can be written as $a\pi$, where a is a constant. What is the value of a ?

17



In the figure above, \overline{MQ} and \overline{NR} intersect at point P , $NP = QP$, and $MP = PR$. What is the measure, in degrees, of $\angle QMR$? (Disregard the degree symbol when gridding your answer.)

3**3**

19

The graph of a line in the xy -plane passes through the point $(1, 4)$ and crosses the x -axis at the point $(2, 0)$. The line crosses the y -axis at the point $(0, b)$. What is the value of b ?

20

$$(7532 + 100y^2) + 10(10y^2 - 110)$$

The expression above can be written in the form $ay^2 + b$, where a and b are constants. What is the value of $a + b$?

STOP

If you finish before time is called, you may check your work on this section only.
Do not turn to any other section.

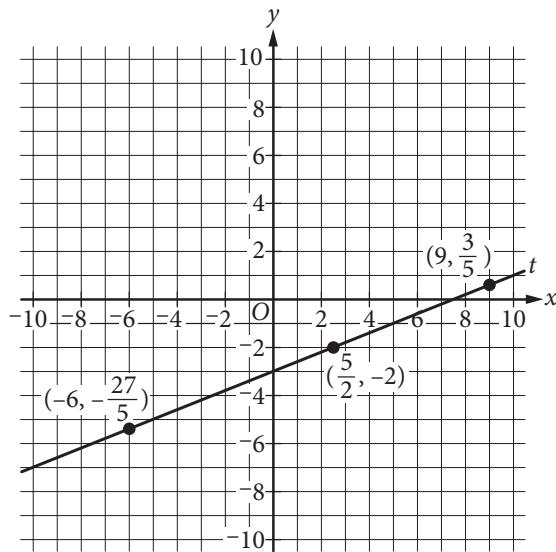


31

In 1854, during the California gold rush, each ounce of gold was worth \$20, and the largest known mass of gold found in California was worth \$62,400 in that year. What was the weight, in pounds, of this mass of gold? (16 ounces = 1 pound)

32

Line t is shown in the xy -plane below.



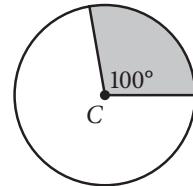
What is the slope of line t ?

4**4**

33

The score on a trivia game is obtained by subtracting the number of incorrect answers from twice the number of correct answers. If a player answered 40 questions and obtained a score of 50, how many questions did the player answer correctly?

34



Point C is the center of the circle above. What fraction of the area of the circle is the area of the shaded region?

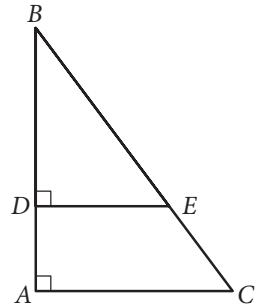


35

$$\begin{aligned}y &= x^2 - 4x + 4 \\y &= 4 - x\end{aligned}$$

If the ordered pair (x, y) satisfies the system of equations above, what is one possible value of x ?

36



In the figure above, $\tan B = \frac{3}{4}$. If $BC = 15$ and

$DA = 4$, what is the length of \overline{DE} ?



Questions 37 and 38 refer to the following information.

Number of Contestants by Score and Day

	5 out of 5	4 out of 5	3 out of 5	2 out of 5	1 out of 5	0 out of 5	Total
Day 1	2	3	4	6	2	3	20
Day 2	2	3	5	5	4	1	20
Day 3	3	3	4	5	3	2	20
Total	7	9	13	16	9	6	60

The same 20 contestants, on each of 3 days, answered 5 questions in order to win a prize. Each contestant received 1 point for each correct answer. The number of contestants receiving a given score on each day is shown in the table above.

37

What was the mean score of the contestants on Day 1?

38

No contestant received the same score on two different days. If a contestant is selected at random, what is the probability that the selected contestant received a score of 5 on Day 2 or Day 3, given that the contestant received a score of 5 on one of the three days?

STOP

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