

Read each problem. Circle the letter of the best answer.

- 1 Which number can replace the x to make this number sentence true?

$$x + 3 < 9$$

- A 5 C 8
B 6 D 12

Did you choose A? That's correct.
Subtract 3 from each side:

$$x + 3 - 3 < 9 - 3$$

$$x < 6$$

The symbol $<$ means *is less than*, so find the answer choice that is less than 6. Only answer A, 5, is.

- 2 Which expression means 6 greater than the quantity n ?

- F $6n$ H $n + 6$
G $n - 6$ J $\frac{n}{6}$

- 3 Sergei works after school at a TV repair shop. For 20 hours of work, he earns \$140. Which equation may be solved for h to find Sergei's hourly rate of pay?

- A $20h = 140$
B $140h = 20$
C $h + 20 = 140$
D $h = 20 \times 140$

- 4 Evaluate $4a - 10$ if $a = 7$.

- F 11 H 28
G 18 J 37

- 5 What is the value of m in this equation?

$$6m = 24$$

- A 4 C 18
B 6 D 30

- 6 A plane is carrying 8 crew members and p passengers.



Average weight of a person = 160 pounds

Which expression represents the weight of the people the plane is carrying?

- F $(8 + p) \times 160$
G $p + 8 \times 160$
H $8 + p \times 160$
J $p + (8 \times 160)$

- 7 What is the value of y in this equation?

$$5y = 80$$

- A 15 C 85
B 16 D 400

- 8 What value of w makes this number sentence true?

$$w - 8 > 11$$

- F 3 H 19
G 4 J 20

Read each problem. Write your answer.

- 9 If $x = 5$ and $y = 2$, what is the value of this expression?

$$3x + 4y - 3$$

20

To evaluate the expression, replace the variables with the given values:
 $3x + 4y - 3$ becomes $3(5) + 4(2) - 3$. Then carry out the operations:
 $15 + 8 - 3 = 20$. The value of the expression is 20.

- 10 Natasha has q quarters. Willis has 5 more than twice that. Write an expression to represent the number of quarters Willis has.

- 11 Brent has m model airplanes. If he had 5 fewer, he would have 14. Write an equation to represent the number of model airplanes Brent has.



- 12 Solve this equation for z . Show your work.

$$z + 11 = 13$$

- 13 Solve the inequality below for w . Show your work.

$$4w < 16$$

- 14 Evaluate this expression if $a = 8$ and $b = 5$. Show your work.

$$5a - 6b + 12$$
