Write and Evaluate Expressions

Essential Question How can you write and evaluate expressions?

🔑 UNLOCK the Problem REAL WORLD

Montel hires Shea to buy some tools for him at the hardware store. Montel will pay Shea $5 more than the cost of the tools she buys.

A. How can you represent this payment as an expression?

B. How can you use the expression to calculate what Montel will pay Shea?

- The problem states that Montel will pay $5 *more than cost*. What operation do the words *more than* suggest?

  _____

🔒 Write an expression for what Montel will pay.

STEP 1 Choose a variable and explain what it stands for.

Let *c* equal the cost of the tools.

_____

STEP 2 Write a word expression.

$5 more than the cost.

_____

5 dollars more than the cost

$5 + c$

STEP 3 Replace the word expression with an addition expression using *c*.

$5 + c$

So, an expression that tells how much Montel owes Shea is

$5 + c$.

Try This! If the tools cost a total of $18, how much will Montel pay Shea?
Evaluate the expression $5 + c$ for $c = 18$.

STEP 1 Write the expression.   _____

_____

STEP 2 Replace *c* with _____. $5 +$ _____

_____

STEP 3 Add to evaluate. $5 + 18 =$ _____

So, Montel will pay Shea _____.

Math Talk What key words might tell you that you need to use addition in a word problem?

Share and Show [MATH BOARD]

Write an expression.

Tallahassee's temperature is 15 degrees less than the temperature in Miami.

1a. What operation does the phrase *less than* suggest?

_____

1b. Write a word expression:

_____

1c. Write an expression for Tallahassee's temperature. Let m stand for the temperature in Miami.

_____

1d. Evaluate the expression for Tallahassee's temperature for $m = 90$.

_____

Evaluate each expression for the value given.

2. $b - 45$ for $b = 70$

_____

3. $13 + a$ for $a = 40$

_____

On Your Own

Write an expression.

4. Zeke has some tropical fish, f. Dean gave Zeke 5 new fish. How many fish does Zeke have now?

_____

5. Myra had some candles, c. She used up 12 of them. How many candles does Myra have now?

_____

Evaluate each expression for the value given.

6. $s - 18$ for $s = 80$

_____

7. $49 + k$ for $k = 31$

_____

8. $w \times 6$ for $w = 13$

_____

9. $60 \div n$ for $n = 20$

_____

10. $t \times 12$ for $t = 8$

_____

11. $r - 25$ for $r = 110$

_____

Problem Solving REAL WORLD

12. Keith is 2 inches shorter than his sister. If s represents his sister's height, what expression can you write that represents Keith's height?

_____