

MY Homework

Lesson 6

Evaluate Expressions

Homework Helper



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Kevin used half of the tools from his toolbox. An hour later he put 3 tools back. How many tools is Kevin still using if he had z tools in his toolbox? Write an expression. Then evaluate the expression if $z = 8$.

Write the expression.

$$z \div 2 - 3$$

Replace z with 8.

$$8 \div 2 - 3$$

When there are no parentheses, first multiply or divide, in order, from left to right.

$$\begin{array}{c} 8 \div 2 - 3 \\ | \quad \quad \quad \diagdown \\ 4 - 3 \\ \quad \quad \quad \diagup \\ 1 \end{array}$$

Kevin is still using 1 tool.

Practice

Algebra Evaluate each expression if $c = 4$ and $d = 7$.

1. $15 - d$

$$15 - \underline{7} = \underline{8}$$

2. $16 + c$

$$16 + \underline{4} = \underline{20}$$

3. $35 \div d$

$$35 \div \underline{7} = \underline{5}$$

Algebra Evaluate each expression if $x = 14$ and $y = 6$.

4. $(x + y) \div 4$

$$\begin{array}{c} (14 + 6) \div 4 \\ \quad \quad \quad \diagdown \quad | \\ 20 \div 4 = 5 \end{array}$$

5. $x - 2 \times 2$

$$\begin{array}{c} 14 - 2 \times 2 \\ | \quad \quad \quad \diagdown \\ 14 - 4 = 10 \end{array}$$

6. $y + 24 \div 2$

$$\begin{array}{c} 6 + 24 \div 2 \\ | \quad \quad \quad \diagdown \\ 6 + 12 = 18 \end{array}$$



Problem Solving

Mathematical
PRACTICE 4

Model Math Write an expression for each situation. Then evaluate it.

7. Monica has 7 hats. Andrea has b fewer hats than Monica. If $b = 5$, how many hats does Andrea have?

$7 - b$; $7 - 5 = 2$ hats

8. There are 4 shelves with canned dog food. Each shelf has t cans. Then Tracy adds 2 cans to only 1 of the shelves. If $t = 8$, how many cans are on the shelves altogether?

$4 \times t + 2$; $4 \times 8 + 2 = 34$ cans

9. Valerie is making identical quilts for herself and her sister. For each quilt she buys 5 yards of solid fabric and w yards of printed fabric. If $w = 4$, how much fabric did Valerie buy to make both quilts?

$(5 + w) \times 2$; $(5 + 4) \times 2 = 18$ yards

Sample answers: 10, 11

Vocabulary Check



10. Explain what a variable is.

A variable is a symbol or letter that stands for an unknown.

11. What does it mean to evaluate an expression?

To evaluate an expression means to replace a variable with a number in order to find its value.

Test Practice

12. Evaluate the expression $h + 8 \div 4$ if $h = 16$.

(A) 20

(C) 8

(B) 18

(D) 6