Name _____ Date _____ Class_____

Evaluating Expressions

A **variable** is a letter that represents a number that can change in an
expression. When you **evaluate** an algebraic expression, you substitute
the value given for the variable in the expression.

- Algebraic expression: $x - 3$

  The value of the expression depends on the value of the variable x.

  If $x = 7$ $\rightarrow$ $7 - 3 = 4$

  If $x = 11$ $\rightarrow$ $11 - 3 = 8$

  If $x = 25$ $\rightarrow$ $25 - 3 = 22$

- Evaluate $4n + 5$ for $n = 7$.

  Replace the variable n with 7. $\rightarrow 4(7) + 5$

  Evaluate, following the order of operations. $\rightarrow 4(7) + 5 = 28 + 5 = 33$

Evaluate each expression for the given value. Show your work.

1. $a + 7$ when $a = 3$

   $a + 7 = 3 + 7 =$ ____

2. $y \div 3$ when $y = 6$

   $y \div 3 =$ ____ $\div 3 =$ ____

3. $n - 5$ when $n = 15$

   $n - 5 =$ ____ $- 5 =$ ____

4. $(6 + d) \bullet 2$ when $d = 3$

   $(6 + d) \bullet 2 = (6 +$ ____ $) \bullet 2$

   $=$ _____ $\bullet 2 =$ ____

5. $3n - 2$ when $n = 5$

   $3n - 2 = 3($ ____ $) - 2 =$ ____

6. $6b$ when $b = 7$

   _____

7. $12 - f$ when $f = 3$

   _____

8. $\dfrac{m}{5}$ when $m = 35$

   _____

9. $2k + 5$ when $k = 8$

   _____

10. $10 - (p + 3)$ when $p = 7$

   _____

Answers

1. 10
2. 6; 2
3. 15; 10
4. 3; 9; 18
5. 5; 13
6. 42
7. 9
8. 7
9. 21
10. 0