Lesson 4.1 ~ Expressions and Equations

Name_____ Period_____ Date_____

Write an algebraic expression for each phrase.

1. the product of x and seven

2. the sum of 8 and p

3. two more than the product of y and four

4. the quotient of k and ten

Evaluate each expression.

5. $y + 6$ when $y = 13$

6. $-3x + 2$ when $x = -5$

7. $4m^2$ when $m = 3$

8. $24 - 5d$ when $d = 6$

9. $7x + \frac{2}{3}$ when $x = \frac{1}{3}$

10. $2.1w + 4.5$ when $w = -1$

11. $(a + b)^2$ when $a = -4$ and $b = 9$

12. $\frac{3y}{2} + 6x$ when $x = -2$ and $y = 10$

13. The fire department is having a BBQ fundraiser. The hot dogs costs $1.50 each and cans of soda cost $0.75 each. The department uses the algebraic expression $1.50x + 0.75y$ to calculate customers' total expenses.

a. What does the x variable represent?

b. What does the y variable represent?

c. A family buys 7 hot dogs and 4 sodas. What are their total expenses?

Determine if the number given is the solution to the equation.

14. $7 + 3x = 19$ *Is* 4 *the solution?*

15. $\frac{p}{4} + 10 = 12$ *Is* 8 *the solution?*

16. $-2y + 5 = -1$ *Is* 3 *the solution?*

17. $1.3m - 5.6 = -3$ *Is* -2 *the solution?*