Name _____ Class _____

1-1 & 1-2 Worksheet: Evaluating & Writing Algebraic Expressions

1. What is a **variable**? Give an example.

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_____

2. What is a **coefficient**? Give an example.

_____

_____

3. What is an **expression**? Give an example.

_____

_____

4. What is a **constant**? Give an example.

_____

_____

5. What does it mean to **substitute**? Give an example.

_____

_____

6. What does it mean to **evaluate**? Give an example.

_____

_____

7. Evaluate each expression for the given value of the variable.

a. $x^3 + 7$ for $x = 4$

b. $7y + 2$ for $y = 5$

c. $3(c + 9)$ for $c = 6$

d. $4m - 2n$ for $m = 25$ and $n = 2.5$

e. $4.2y - 3x$ for $y = 6$ and $x = 1.5$

f. $3(z - 4 + y)^3$ for $z = 5$ and $y = 2$

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8. If c is a temperature in degrees Celsius, then **1.8c + 32** can be used to find the temperature in degrees Fahrenheit. Convert each temperature from degrees Celsius to degrees Fahrenheit.

a. Boiling point of water at sea level: 100°C

b. Boiling point of water at an altitude of 4400 meters: 85°C

9. A student says that the algebraic expression $5 + 7 \bullet x$ can also be written as $5 + 7x$. Is the student correct? Why or why not?

Write an algebraic expression for each word phrase.

10. five less than the product of three & p

11. 77 more than the product of two and u

12. 16 more than the quotient of d & seven

13. six minus the quotient of u and two

14. one more than the quotient of five & n

15. two minus the product of three and p

16. 45 less than the product of 78 and j

17. four plus the quotient of r and five

18. 14 more than the product of 59 and q

19. six times the sum of four and y

20. Mark is going to work for his father's pool cleaning business during the summer. Mark's father is going to pay him $5 for each pool he cleans. Write an algebraic expression that shows how much Mark makes for cleaning "n" pools.

21. A community center is trying to raise $1680 to purchase new exercise equipment. The center wants each member to donate the same amount of money. Write an algebraic expression that shows how much each of the "n" members would need to donate to make it even.