Chapter 1 Quiz 1 Review. Show all work on lined paper.

Write an algebraic expression for each verbal expression.

1. The sum of 38 and m
   a. $m \times 38$
   b. $38 \div m$
   c. $38 - m$
   d. $38 + m$
2. 35 less the product of 4 and x.
   a. $35 + 4x$
   b. $4x \times 35$
   c. $35 \div 4x$
   d. $35 - 4x$
3. $12x$
   a. The sum of x and 12
   b. The difference of 12 and x
   c. The product of 12 and x
   d. The quotient of 12 and x
4. $5x^2 + 2$
   a. 5 times x squared less 2
   b. Five plus x squared plus 2
   c. The product of 5 times x squared and 2
   d. Five times x squared plus 2
5. $2x^3 - 4x$
   a. 2 times x squared minus 4 times x
   b. 2 times x cubed increased by 4 times x
   c. The sum of 2 times x cubed and 4 times x
   d. 2 times x cubed minus 4 times x
6. $5x^4 \div 6$
   a. Six divided by 5 times x to the fourth power
   b. The quotient of 5 times x to the fourth power and 6
   c. The product of 5 times x to the fourth power and 6
   d. The sum of 5 times x to the fourth power and 6

Evaluate the expression

7. $2 + 2(2)^2(5) + 8$
   a. 50
   b. 106
   c. 88
   d. 90
8. Evaluate the following expression if $a = 12$, $b = 5$, and $c = 4$.
   $3c + bc - 2a$
   a. 67
   b. 132
   c. 8
   d. 84
9. Evaluate the following expression if $x = 12$, $y = 8$, and $z = 6$.
   $\frac{x^2y-2z}{4}$
   a. 1140
   b. 21
   c. 285
   d. 1296

Name the property used in the equation. Then find the value of n.

10. $11n = 11$
    a. Multiplicative Identity; 1
    b. Multiplicative Identity; 0
    c. Additive Identity; 1
    d. Multiplicative Inverse; 1

Write an algebraic expression for the verbal expression. Then simplify.

11. Three times the sum of c and d decreased by d

Solve. Write your answer as a set of values.

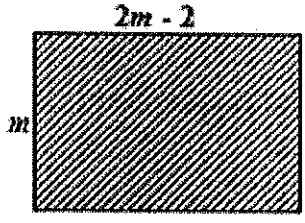
12. $\left(-2\frac{1}{7}\right)p = -3$
    a. $\left\{1\frac{2}{5}\right\}$
    b. $\left\{6\frac{3}{7}\right\}$
    c. $\left\{-1\frac{2}{5}\right\}$
    d. $\left\{-6\frac{3}{7}\right\}$
13. $\frac{a}{-7} - 7 = 5$
    a. {14}
    b. {-84}
    c. {12}
    d. {14.1}
14. $-5.4 = -1.5 + h$
    a. {3.9}
    b. {-3.9}

c. {8.1}
d. {-6.9}

15. $-448 = 64q$
    a. {-512}
    b. {7}
    c. {-2}
    d. {-7}
16. Evaluate the expression $5 + 5(33 - 5^2) + 3$. Show each step.

Write an equation and solve each problem.

17. Find three consecutive integers with a sum of 24.
    a. $x + (x + 1) + (x + 2) = 24; 9, 10, 11$
    b. $x + (x + 2) + (x + 4) = 24; 6, 8, 10$
    c. $x + (x + 1) + (x + 2) = 24; 7, 8, 9$
    d. $x + (x + 1) + (x + 2) = 24; 21, 22, 23$
18.
    a. To isolate x in $ax = b$, what should you divide both sides by?
    b. To isolate x in $\frac{x}{a} = b$, what operation should you perform on both sides of the equation?
19. Four people want to share the price of a gift for their best friend. The price of the item is d dollars and they know that they will need to pay a tax of 6%. Write a simplified algebraic expression for the situation.
20. Write an algebraic expression to represent the area of the rectangle. Then evaluate it to find the area when $m = 3$ cm.



Solve the expression. Remember to write your answer as a set of values.

21. $\frac{5}{9}d = \frac{9}{10}$
22. $a - \frac{1}{2} = \frac{3}{5}$
23. For the equation, $\frac{x}{3} = 15$, a student found the value of x to be 5. Explain the error. What is the correct answer?
24. Use the graph below to answer the questions.
    a. Allie bought 5 pounds of onions, x pounds of squash, and y pieces of corn. Write an expression that represents the amount Allie spent on produce.
    b. Serena bought p pounds of squash and twice that weight of potatoes. Write an expression that represents the amount Serena spent on produce.

Pearlie's Produce	
Onions	$0.98 per lb
Squash	$0.79 per lb
Potatoes	$0.45 per lb
Corn	$0.75 each

25. Identify the terms, coefficients, exponents, constants, and variables from the algebraic expression below.
    $4x^3 + 12x - 3y - 6$

Evaluate using Circles of Evaluation.

26. $7 + 12 \div 2^2 \cdot 3 + 8$
27. $9 \cdot 6 - 5(10 - 3)$

Write the expression represented by the circle of evaluation. Then evaluate.

28.