

Algebra I
Ch. 3 Quiz Review

NAME: _____
DATE: _____ HOUR: _____

Score: / 8

Solve each equation. Show all your work.

1. $x + 6 = 10$

2. $a - 9 = 15$

3. $3p = 27$

4. $\frac{t}{5} = 4$

5. $2y + 6 = 18$

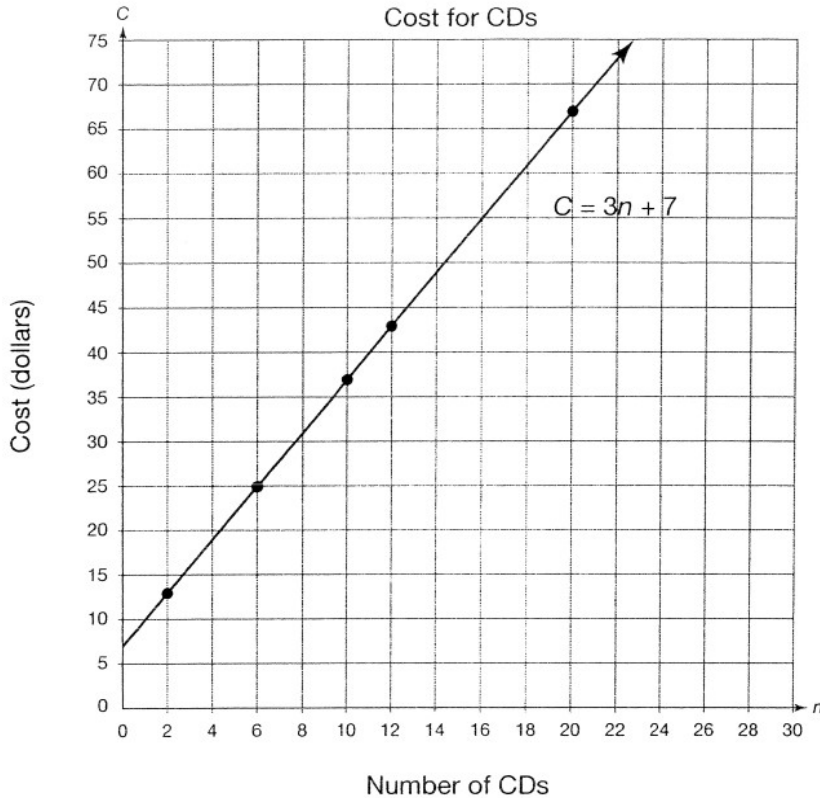
6. $38 = 5s - 7$

7. $\frac{w}{3} + 10 = 17$

8. $28 = \frac{n}{2} - 4$

Read the scenario below. Use the scenario to answer Questions 9 and 10.

An online music store is selling CDs for \$3 apiece and charges a flat shipping fee of \$7. The cost C for buying n CDs is given by the equation $C = 3n + 7$. Below is a graph of this equation.



9. Explain how you would use the graph to determine whether 14 is a solution to the equation $49 = 3n + 7$. Use complete sentences in your answer.

When $n=14$, does $C=49$?

10. Determine whether 25 is a solution of the equation $75 = 3n + 7$ algebraically. Show all your work and use a complete sentence in your answer.

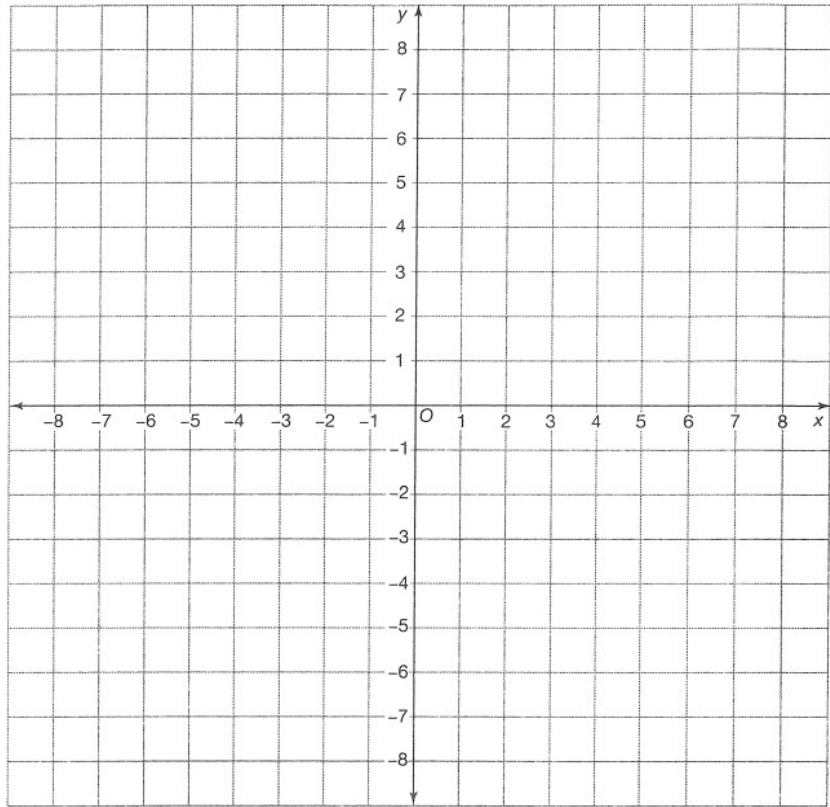
11. Plot and label each point in the coordinate plane.

$A(-5, 6)$

$B(4, 7)$

$C(3, -4)$

$D(-2, -5)$



Write and solve a percent equation to answer each question. Show all your work and use a complete sentence in your answer.

12. 24 is what percent of 60?

13. What is 55% of 120?

14. 24 is 12% of what number?

15. 27 is what percent of 45?

16. 50% of what number is 48?

17. What is 75% of 172?

18. What is 50% of 6?

Find each product or quotient.

19. $-3(-7) = \square$

20. $2(-9) = \square$

21. $\frac{-24}{-3} = \square$

22. Write the integers in order from least to greatest.

6, -7, -10, 4, -6, 2

Find each sum or difference.

23. $-2 + 8 = \square$

24. $9 - (-3) = \square$

25. $-11 - 8 = \square$

Vocabulary

Match each definition to its corresponding term.

- | | | |
|----------|--|---|
| ___ | 1. the horizontal number line in a Cartesian coordinate system | a. Cartesian coordinate system |
| ___ | 2. a pair of numbers of the form (x, y) that represents a unique position in the coordinate plane | b. coordinate plane |
| ___ | 3. the vertical number line in a Cartesian coordinate system | c. ordered pair |
| ___ | 4. the first number in an ordered pair | d. origin |
| <u>a</u> | 5. a method of representing the location of a point using an ordered pair of real numbers of the form (x, y) | e. x-axis |
| ___ | 6. a plane formed by the intersection of a vertical real number line and a horizontal real number line | f. x-coordinate |
| ___ | 7. the second number in an ordered pair | g. y-axis |
| ___ | 8. the point where the x-axis and y-axis intersect in the coordinate plane | h. y-coordinate |

For 9-13, write an equation for the situation using the given variables then solve the equation for the unknown quantity. Show all of your work.

9. You put your printed photos into photo albums. You put 120 pictures into each album, and there are 38 pictures left over. Using a for the number of albums and p for the total number of pictures, write an equation to determine the number of pictures, p , for any value of a . If you use 3 albums, how many pictures do you have in total?

$$p = \underline{\quad} a + \underline{\quad}$$

When $a=3$, $p = \underline{\quad}$
(show your work.)

10. Kiara buys self-assemble furniture, which comes in multiple pieces, for her new apartment. She estimates that her total assembly time, t , in minutes, for n furniture will be 30 minutes, plus 5 minutes for each piece, p . Write an equation to determine her assembly time for any value of p . Use it to determine the total number of pieces in a furniture item that took her 150 minutes to assemble.
11. A wedding photographer determines that it takes him 0.5 minute to take one picture, plus 30 minutes of set-up time. Determine the total amount of time, t , in minutes, that he should allow for each wedding, if he is required to take p pictures. If he determines that he will spend 155 minutes at the next wedding, how many pictures will he take?
12. It takes a baker 30 minutes to gather all of her ingredients. It then takes her 40 minutes to make each batch of bread. Determine the total amount of time, t , in minutes, that it takes the baker to make b batches of bread. If it took the baker a total of 390 minutes one morning to bake bread, how many batches of bread did she make?
13. An old photocopier needs 90 seconds to warm up before making copies. It then takes 2 seconds to make each copy. Determine the total time, t , in seconds, that it takes to make c copies. A recent copy order took the machine a total of 890 seconds. How many copies did the machine make?