Name _____ Class _____ Date _____

Quarter 1 Test — Form A

Chapters 1–3

1. Use an equation to model the relationship in the table.

Month	Cost
1	\$12
2	\$24
3	\$36
4	\$48

Simplify each expression.

2. $2\frac{1}{2} + \left(-3\frac{1}{8}\right)$

3. $-7.4 - 2.8$

4. $\dfrac{8 + 4(3)^2}{2^2 + 3}$

Evaluate each expression for $a = -4$, $b = 6$, and $c = 2.5$.

5. $2ab$

6. $b^2 - 2c$

Write an expression for each phrase.

7. eight less than 12 times x

8. negative five times the quantity three plus k

9. In which quadrant or on which axis would you find the point $(-8, -4)$?

Solve each equation. Then check.

10. $25.08 + 4k = 80.06$

11. $2(y + 5) = 16$

12. $9k - 2 = 43$

Solve. If the equation is an identity, write *identity*. If it has no solution, write *no solution*.

13. $2x - 8 + 3x = 4 + 5x - 12$

14. $7y - 9 = 3y + 11y$

15. Write an equation to model this situation. Then use your equation to solve. Jack has saved \$16.50 to spend on fair ride tickets. Each ticket costs \$0.75. How many tickets can Jack afford?

16. A taxicab company charges each person a flat fee of \$2.25 plus an additional \$0.60 per quarter-mile.
    a. Write a formula to find the total cost for each fare.
    b. Use the formula to find the cost for 1 person to travel 6 mi.

Name _____ Class _____ Date _____

Quarter 1 Test (continued) Form A

Chapters 1–3

Solve and check each inequality.

17. $n - 9.4 \geq 15.6$

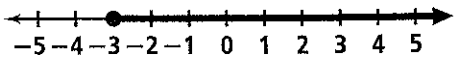
18. $|x - 6| \geq 8$

19. $-20 \leq -4x$

20. $8 + 6n \geq 2$ or $-10n \geq 50$

21. Find the difference. $\begin{bmatrix} -4 & 2 \\ 3 & 8 \end{bmatrix} - \begin{bmatrix} -2 & 1 \\ 6 & -5 \end{bmatrix}$

22. Write an inequality for the graph.

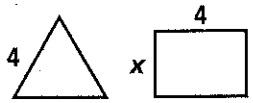


23. Which property is illustrated?

$6(3 + 1) = 6 \cdot 3 + 6 \cdot 1$

Solve each problem.

24. The perimeters of the rectangle and equilateral triangle shown are equal. Find the value of x.



25. You remember bowling games of 116, 105, 109, and 113 however, you cannot remember your score for the fifth game. You know your bowling average is 109, what did you score the fifth game?

26. On four plays, a football team gained 15 yd, lost 6 yd, gained 12 yd, and lost 3 yd. What is the total number of yards gained or lost on the four plays?

Use the table below for Exercises 27–28.

Bus Riders

School	Number of Students	
	To School	Home
Elementary	201	186
Junior High	106	112
Senior High	80	68

27. Find the mean, median, and mode number of students who ride the bus to school.

28. Find the mean, median, and mode number of students who ride the bus home.

29. **Writing** Suppose a friend was absent from class and is having difficulty solving $3(x - 6) > 4(x + 3)$. Explain how to solve the inequality, showing all necessary steps.

30. Justify each step.

$3(2x + 1) + 5x = 6x + 3 + 5x$?

$= 6x + 5x + 3$?

$= (6 + 5)x + 3$ Distributive Property

$= 11x + 3$?