

Name: _____

Date: _____

Pd: _____

Evaluate.

1. $(5y + x) \div 4$ when $y = 3$ and $x = 5$

2. $8(x^2) \div 25$ when $x = 5$

Write the expression in exponential form.

3. $5y \cdot 5y \cdot 5y \cdot 5y$

4. Insert grouping symbols in $5 \cdot 4 + 6 \div 2$ so that the value of the expression is 13.

Decide whether the statement is *true* or *false*.

5. $8 - 6 = 6 - 8$

Evaluate.

6. $4 + (-9)$

7. $-19 - (-3)$

Find the product or quotient.

8. $-36 \div (-4)$

Evaluate.

9. $-9x + 12$ when $x = -2$

Simplify.

10. $\pm\sqrt{196}$

11. $(35 - 10q)\left(-\frac{2}{5}\right)$

Solve the equation if possible.

12. $\frac{y}{3} = -2$

13. $m + 7 = 0$

14. $1 - r = 6$

15. $-80 = -4s$

16. $4x - 5 = 11$

17. $2k + 1 = 5(k - 7)$

18. $4m - 9 = -2(3 - 2m)$

Solve.

19. $\frac{t}{56} = \frac{5}{14}$

20. $\frac{x}{12} = \frac{x+2}{16}$

Decide whether the statement is *true* or *false*.

21. 10% of \$38 is \$.38

22. After an 8% increase in your wages, you receive \$.94 more per hour. About how much did you receive per hour before the increase in your wages?

23. Rewrite $8x - 2y = 10$ so that y is a function of x .

Solve for the indicated variable.

24. $V = \frac{1}{3}Bh$, h

Plot and label the points in a coordinate plane.

25. $A(2, 6)$, $B(-4, -1)$, $C(-1, 4)$, $D(3, -5)$

Use a table of values to graph the equation.

26. $y = -(5 - x)$

Graph the line that has the given intercepts.

27. x -intercept: -5
 y -intercept: 4

Graph.

28. $2x + y - 11 = 0$

Plot the points and find the slope of the line passing through the points.

29. $(-4, -1), (5, -7)$

30. The variables x and y vary directly. Use the given values of the variables to write an equation that relates x and y .

$$x = 2, y = 10$$

31. Decide whether the graphs of the two equations are parallel lines. *Explain* your answer.

$$10y + 20 = 6x, 5y = 3x + 35$$

32. Evaluate the function $f(x) = 6x$ when $x = 3$, $x = 0$, and $x = -4$.

Write an equation of the line with the given slope and y -intercept. Write the equation in slope-intercept form.

33. $m = -4, b = 3$

Write an equation of the line that passes through the given point and has the given slope. Write the equation in slope-intercept form.

34. $(3, -9), m = -5$

Graph the line that passes through the points. Then write an equation of the line in slope-intercept form.

35. $(-2, 5), (2, 4)$

36. Write an equation of a line that is perpendicular to $y = 2x - 1$ and passes through $(-4, 7)$.

Rewrite the equation in standard form with integer coefficients.

37. $y = 7x + 8$

38. A salesperson for an appliance store earns a monthly pay of \$1250 plus a 4% commission on the sales. Write an equation in slope-intercept form that gives the total monthly pay y in terms of sales x .

39. Draw a scatter plot of the data. If possible, draw a best-fitting line for the scatter plot and write an equation of the line. State whether x and y have a *positive correlation*, a *negative correlation*, or *no correlation*.

x	y
56	152
58	157
61	162
64	167
67	172
70	178

Solve the inequality. Graph the solution on a number line.

40. $2 < x - 3$

41. $-\frac{1}{3}n > 3$

42. $8y + 3 \leq 15$

43. $7x + 2 \geq 3(x - 4)$

Solve the inequality. Write a sentence that describes the solution.

44. $-2x > 8$ or $3x + 1 \geq 7$

45. $12 > 4 - x > -5$

Solve.

46. $|x + 7| = 11$

47. $|4x + 5| - 6 \leq 1$

Graph the inequality in a coordinate plane.

48. $-4x < 8$

49. $3x + 4y \leq 12$

50. Walking at a rate of 210 feet per minute, you take 12 minutes to walk from your home to school. Your uncle's home is closer to school than your home is. Write an inequality for the distance d (in feet) that your uncle lives from your school.