

Summer Practice Work

Date _____

Evaluate each expression.

1) $\left((-3) - \frac{4}{-1}\right)(4)$

2) $3 + \frac{1}{-1} - (-3)$

3) $(-3)(-3)^2 - 6$

Evaluate each using the values given.

4) $1 + z + 5y$; use $y = -4$, and $z = 1$

5) $\frac{x}{5} + |z|$; use $x = 5$, and $z = 4$

6) $a - 2 + ca$; use $a = 6$, and $c = 4$

Simplify each expression.

7) $8(n - 1) - 5n$

8) $-9 + (-2 + 10x) \cdot -1$

Solve each equation.

9) $6(-2n - 5) = -7n + 5$

10) $-5(a + 8) = -47 - 5a$

11) $\frac{|n - 1|}{3} = 1$

12) $\frac{|5x|}{9} = 4$

Solve each inequality.

13) $3(-3n + 5) < 21 - 6n$

14) $-4(x + 1) < 12 - 6x$

Solve each compound inequality.

15) $-1 < \frac{p}{8} \leq 1$

16) $6 \leq m + 7 \leq 16$

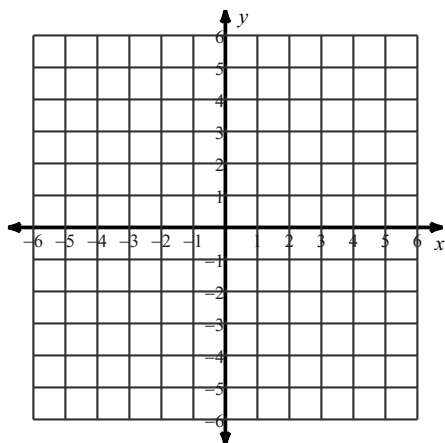
Solve each inequality.

17) $|p + 7| - 2 \geq 15$

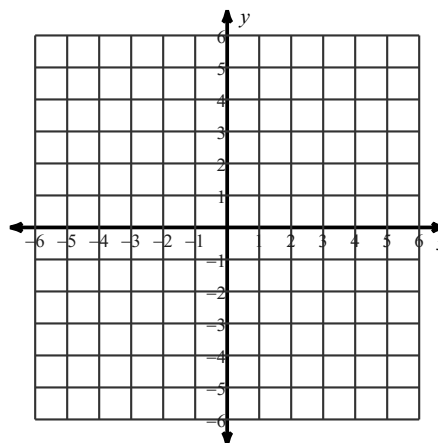
18) $\frac{|v + 1|}{5} \leq 4$

Sketch the graph of each line.

19) $8x + 3y = -12$



20) $2x + 3y = -9$



Write the slope-intercept form of the equation of the line through the given point with the given slope.

21) through: $(-4, 1)$, slope = -1

Write the slope-intercept form of the equation of the line through the given points.

22) through: $(-4, -1)$ and $(0, -4)$

Write the slope-intercept form of the equation of the line described.

23) through: $(-5, 1)$, parallel to $y = \frac{1}{5}x - 3$

24) through: $(-5, 3)$, perp. to $y = 5x + 4$

Factor each completely.

25) $p^2 + 10p$

26) $n^2 + 9n$

27) $3x^2 - 25x + 50$

28) $2x^2 + 13x - 24$

29) $9a^2 + 30a + 25$

30) $x^2 + 4x + 4$

Solve each equation by taking square roots. Round to three decimal places.

31) $n^2 = -57$

32) $a^2 = -77$

33) $x^2 + 7 = 9$

34) $n^2 - 1 = 97$

Solve each equation by factoring.

35) $x^2 - 9x = -8$

36) $n^2 = -14 - 9n$

Simplify each expression.

37) $(x - 7x^2 + x^4) - (7x^3 + 7x - 8x^2)$

38) $(3v^4 + 4v^3 - 8v^2) - (6v + 2v^2 + 5v^4)$

Find each product.

39) $(5n + 8)(8n + 4)$

40) $(8b + 6)(6b - 8)$

41) $(2 - 8v)(2 + 8v)$

42) $(3 + 6x)(3 - 6x)$

Divide.

43) $(3r^3 - 18r^2 - 55r + 64) \div (r - 8)$

44) $(x^3 + 2x^2 + 7x + 7) \div (x + 1)$

Evaluate each function.

45) $g(x) = -3x^2 - x$; Find $g(1)$

46) $g(x) = x^2 - 3$; Find $g(6)$

Simplify.

47) $\sqrt{54x^4}$

48) $\sqrt{245x^3}$

49) $-\sqrt{2} + 3\sqrt{8}$

50) $2\sqrt{54} - 2\sqrt{6}$

