

## 4th Quarter Review

Date \_\_\_\_\_ Period \_\_\_\_\_

**Evaluate each expression.**

1)  $(5 - 4 \div 4) \cdot 3$

2)  $5 \cdot 3^2 - (4 + 6)$

**Evaluate each using the values given.**

3)  $m + mp - m$ ; use  $m = 6$ , and  $p = 5$

4)  $y(x + 1 + 1 + x)$ ; use  $x = 4$ , and  $y = -2$

**Solve each equation.**

5)  $\frac{r}{16} - 10 = -9$

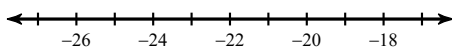
6)  $-11 = 9 - 5n$

7)  $30 + m = -2(2m + 5)$

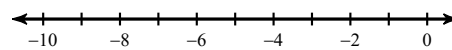
8)  $5(-5 - 6x) - 8x = 35 - 8x$

**Solve each inequality and graph its solution.**

9)  $-10(k - 2) \leq 220$



10)  $8(m + 5) + 4m \geq 7m + 10$



**Simplify each expression.**

11)  $(8x + 3x^2 + 4x^3) - (7x^2 - x^3 - x)$

12)  $(3m^4 + 4m^2 + 1) + (7m^4 + 4m^3 - 7m^2)$

13)  $(5n^3 - 8n + 7n^2) + (4n - 3n^2 + 6n^3)$

14)  $(n^2 + 4n^3 + 8n) - (6n - 7n^2 + 2n^3)$

**Find each product.**

15)  $(2a - 1)(6a - 4)$

16)  $(4p - 3)(6p - 7)$

17)  $(6b - 1)^2$

18)  $(8b - 4)(8b + 4)$

**Factor each completely.**

19)  $5a^3 + 3a^2 - 15a - 9$

20)  $12v^3 - 21v^2 - 16v + 28$

21)  $n^2 - 4n + 3$

22)  $2k^2 + 11k + 9$

23)  $9k^2 - 25$

24)  $n^2 + 2n + 1$

**Solve each system by graphing.**

$$25) \begin{aligned} y &= -\frac{5}{4}x - 3 \\ y &= -\frac{1}{4}x + 1 \end{aligned}$$

$$26) \begin{aligned} 2x - 3y &= -6 \\ 2x - y &= 2 \end{aligned}$$

**Solve each system by elimination.**

$$27) \begin{aligned} 2x + 6y &= -14 \\ 2x - 6y &= -14 \end{aligned}$$

$$28) \begin{aligned} 2x + 5y &= -6 \\ -4x - 6y &= 12 \end{aligned}$$

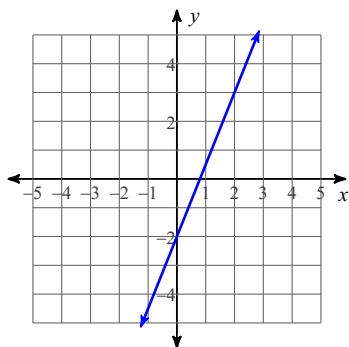
**Find the slope of the line through each pair of points.**

$$29) (-8, -5), (0, 1)$$

$$30) (5, -10), (9, 9)$$

**Write the slope-intercept form of the equation of each line.**

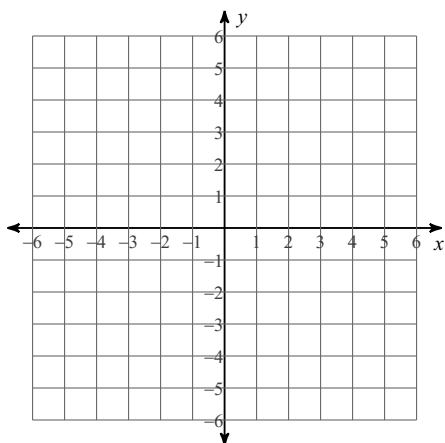
31)



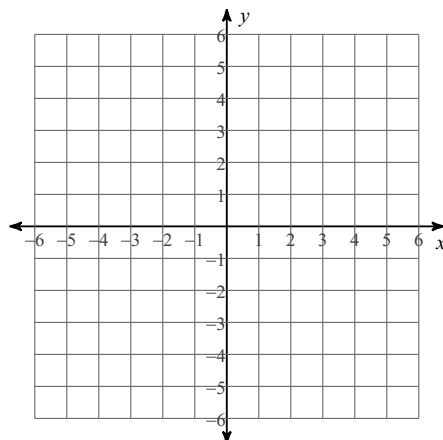
32)  $x - 6y = 12$

Sketch the graph of each line.

33)  $y = \frac{3}{4}x - 3$



34)  $2x - 5y = -25$



Solve each equation by taking square roots.

35)  $3v^2 = 75$

36)  $9x^2 + 7 = 88$

Solve each equation by factoring.

37)  $r^2 - 3r - 18 = 0$

38)  $5r^2 - 39r - 2 = 6$

Solve each equation with the quadratic formula.

39)  $m^2 + 5m - 14 = 0$

40)  $6m^2 - 6m - 9 = 3$