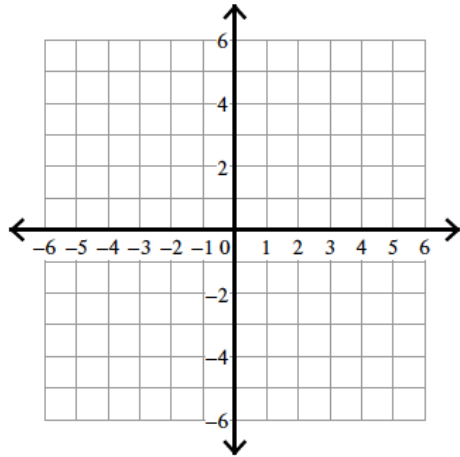


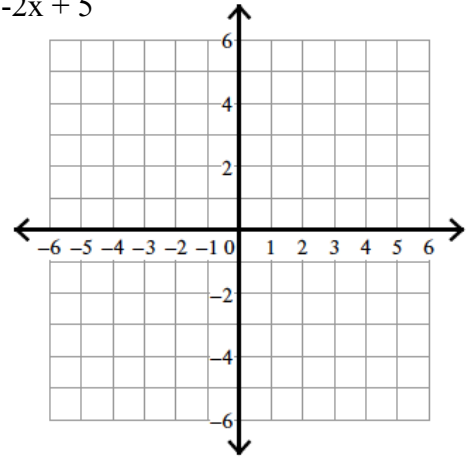
Units 1 and 2 Review

Sketch the graph of each line.

1) $x - 4y = -8$



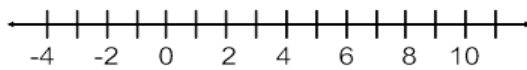
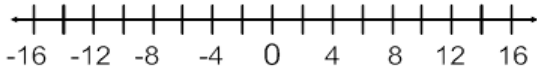
2) $y = -2x + 5$



Solve each compound inequality and graph its solution.

3) $11r - 11 < 110$ or $11r - 7 < 92$

4) $16 < 7 + 9n < 25$



Solve each equation.

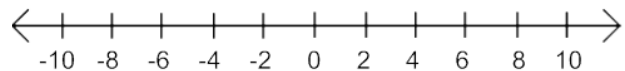
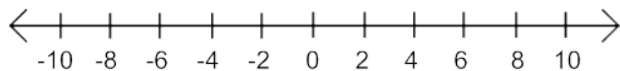
5) $|4x - 8| = 16$

6) $|2 - 2n| = -20$

Solve each inequality and graph its solution.

7) $4 + |10x - 5| > 99$

8) $10 + |2 - 7p| < 64$



Simplify. Write "undefined" for expressions that are undefined.

$$9) 3 \begin{bmatrix} 1 \\ 3 \\ -6 \end{bmatrix} - \begin{bmatrix} 3 \\ 3 \\ -4 \end{bmatrix}$$

$$10) 2 \begin{bmatrix} 1 & 4 & 3 & -6 \\ 0 & 6 & -2 & -3 \end{bmatrix}$$

$$11) \begin{bmatrix} -1 & -2 & 2 & 0 \\ -1 & 3 & 4 & -4 \end{bmatrix} + \begin{bmatrix} -1 & 5 & -6 & -5 \\ 2 & 1 & -5 & -1 \end{bmatrix}$$

$$12) \begin{bmatrix} -1 & 2 \\ 1 & 4 \end{bmatrix} \cdot \begin{bmatrix} 5 & 3 & 0 \\ -5 & -2 & 2 \end{bmatrix}$$

Perform the indicated operation.

$$13) \quad \begin{aligned} f(x) &= x - 1 \\ g(x) &= x + 1 \\ \text{Find } f(x) - g(x) \end{aligned}$$

$$14) \quad \begin{aligned} g(x) &= 4x - 3 \\ f(x) &= x^3 + 5x^2 \\ \text{Find } g(x) + f(x) \end{aligned}$$

$$15) \quad \begin{aligned} f(x) &= 2x^2 + 2 \\ g(x) &= 4x - 2 \\ \text{Find } f(x) \div g(x) \end{aligned}$$

$$16) \quad \begin{aligned} g(x) &= x^2 + 5x \\ h(x) &= x - 4 \\ \text{Find } g(h(7)) \end{aligned}$$

$$17) \quad \begin{aligned} f(x) &= x + 3 \\ g(t) &= x^2 - 2 \\ \text{Find } g(f(x)) \end{aligned}$$

$$18) \quad \begin{aligned} g(t) &= t^2 - 5t \\ f(t) &= 3t + 2 \\ \text{Find } g(f(t - 1)) \end{aligned}$$

Solve each system by elimination

19) $-8x - 6y = 6$
 $x - 12y = 12$

20) $4x + 4y = -12$
 $-5x + 6y = 4$

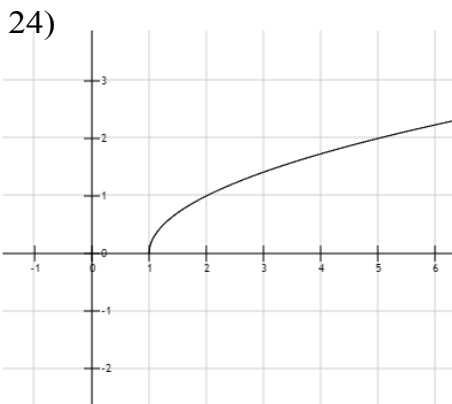
Solve each system by substitution

21) $-4x + 6y = 20$
 $-3x + y = 1$

22) $-x + 3y = 0$
 $x - 3y = 0$

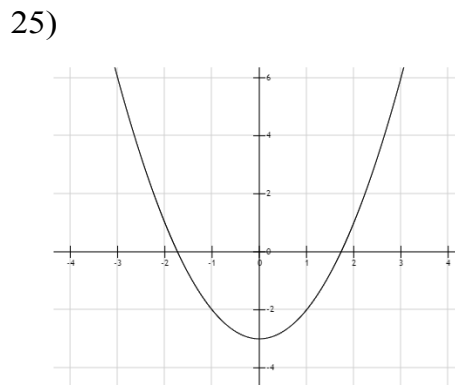
23) Julia and Jaidee are selling pies for a school fundraiser. Customers can buy cherry pies and pumpkin pies. Julia sold 8 cherry pies and 8 pumpkin pies for a total of \$168. Jaidee sold 2 cherry pies and 1 pumpkin pie for a total of \$25. What is the cost each of one cherry pie and one pumpkin pie?

State the domain and range of the graph.



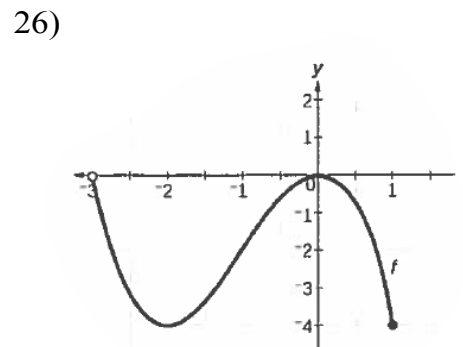
Domain: _____

Range: _____



Domain: _____

Range: _____



Domain: _____

Range: _____

Describe the transformation that has occurred to the parent function. Then sketch the graph.

27) $y = \sqrt{x - 3} - 2$

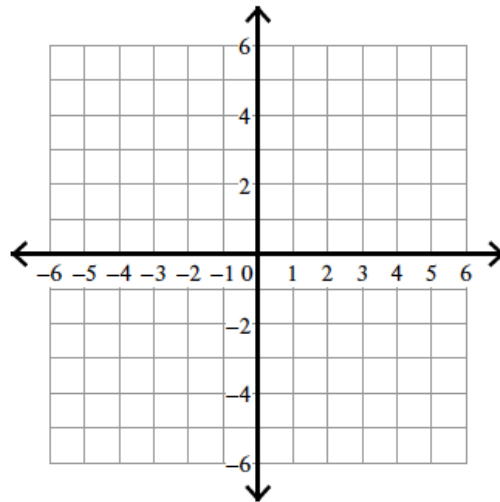
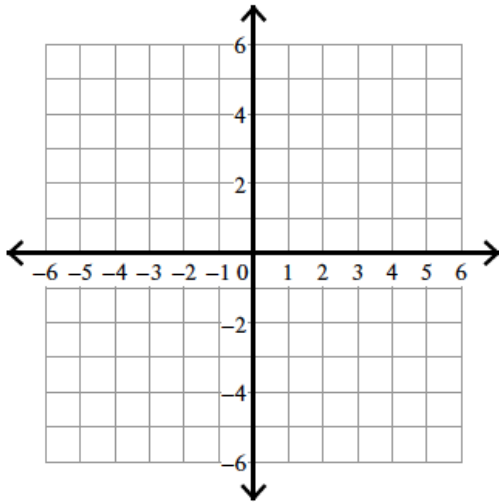
28) $y = -\frac{1}{3}|x + 4| + 2$

Parent: _____

Parent: _____

Transformation: _____

Transformation: _____



Graph the piecewise functions.

29) $f(x) = \begin{cases} 1-x, & x \leq 4 \\ 2x-11, & x > 4 \end{cases}$

30) $f(x) = \begin{cases} x+3, & x < -2 \\ x, & -2 \leq x < 1 \\ -x+2, & x \geq 1 \end{cases}$

