

Assignment

Date _____ Period _____

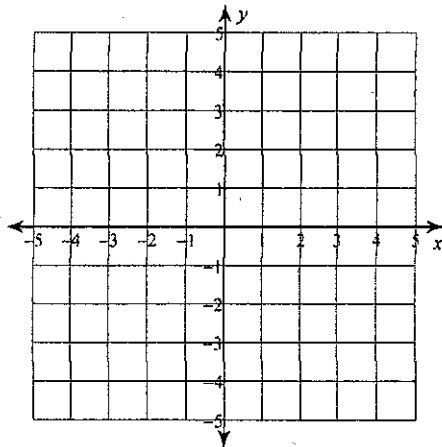
Solve each system by graphing.

$$1) \begin{cases} x = -7y - 42 \\ 13x = -7y + 42 \end{cases}$$

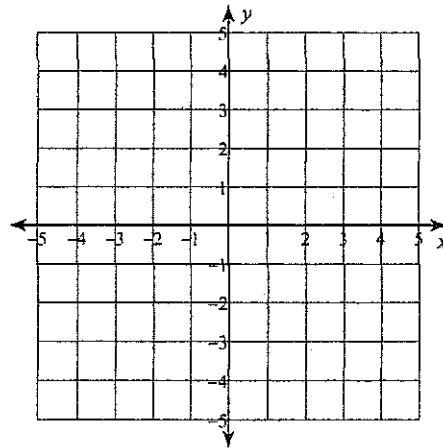
$$2) \begin{cases} -7y - 49 = x \\ -5x = -7 - 7y \end{cases}$$

Sketch the solution to each system of inequalities.

$$3) \begin{cases} y \geq 2x + 3 \\ y > -2x - 1 \end{cases}$$



$$4) \begin{cases} y > \frac{1}{2}x + 3 \\ y \leq \frac{1}{2}x - 1 \end{cases}$$



Solve each system by substitution.

$$5) \begin{cases} 5x - y = 9 \\ 6x - 4y = 22 \end{cases}$$

$$6) \begin{cases} 5x + 8y = -8 \\ 15x + 24y = -1 \end{cases}$$

Solve each system by elimination.

$$7) \begin{cases} 16x + 12y = -20 \\ -8x - 6y = 10 \end{cases}$$

$$8) \begin{cases} 3x + 5y = 26 \\ -6x + 6y = 12 \end{cases}$$

$$9) \begin{cases} -3x - 4y + 3z = 19 \\ 4x + 3y - 2z = -8 \\ y + z = 0 \end{cases}$$

Find the inverse of each function.

10) $g(x) = \frac{2}{x+1}$

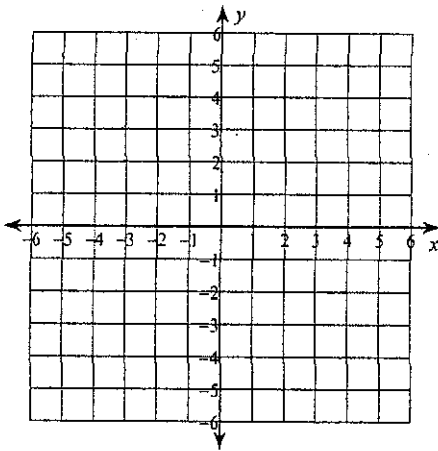
11) $h(n) = \sqrt[3]{n-1} + 2$

12) $f(x) = \frac{1}{x} - 1$

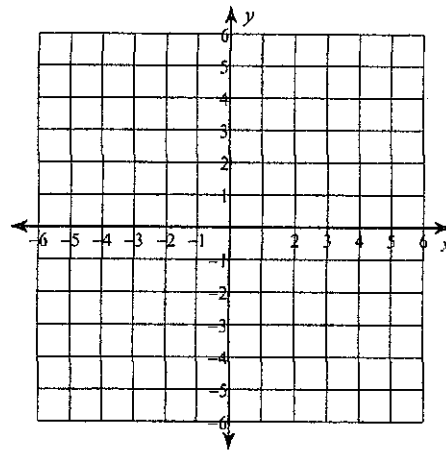
13) $f(x) = 2(x-1)^3$

Graph each equation. State the domain, range, increasing and decreasing in correct interval notation.

14) $y = |x+3| - 4$



15) $y = |x+4| - 4$



Perform the indicated operation.

16) $g(t) = t^2 + 1$
 $h(t) = 2t - 4$
 Find $g(-2) - h(-2)$

17) $f(n) = -n^3 - 2n$
 $g(n) = 4n + 2$
 Find $f(-1) \div g(-1)$

18) $g(x) = 3x - 1$
 $f(x) = -x - 3$
 Find $(g - f)(-5)$

19) $f(x) = -2x - 2$
 $g(x) = x - 2$
 Find $(f \cdot g)(1)$

20) $h(a) = a + 3$
 $g(a) = 3a - 3$
 Find $\left(\frac{h}{g}\right)(-4)$

21) $g(n) = 4n - 1$
 $h(n) = 2n + 3$
 Find $(g \circ h)(8)$