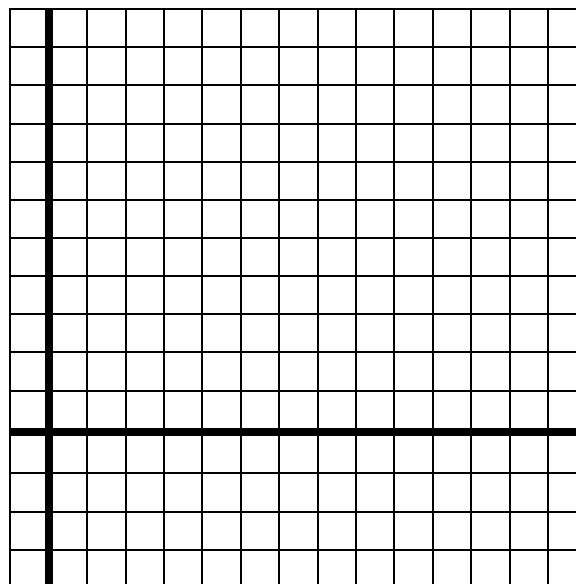1. Consider the line with equation $y = 2x - 3$.

   a. Graph the line on the axes to the right.

   b. What equation would describe a line that is parallel to the line $y = 2x - 3$ but is shifted 4 units to the right? Graph that line on the axes to the right.

   c. Sketch the graph of $y = 0.5x + 1.5$

2. If $f(x) = \dfrac{5}{x} - 3$, what is a formula for $f(x-4)$?

3. Each of the following is has a graph that is the graph of $f(x) = \dfrac{5}{x} - 3$ shifted 2 units. Tell the direction of the shift: right, left, up, down.

   a. $f(x) = \dfrac{5}{(x-2)} - 3$

   b. $f(x) = \dfrac{5}{(x+2)} - 3$

   c. $f(x) = \dfrac{5}{x} - 1$

   d. $f(x) = \dfrac{5}{x} - 5$

4. Find the values of the parameters s and d if the points $(3,-2)$ and $(6,4)$ are on the graph of
   $$f(x) = \dfrac{s}{(x-d)}.$$

5. If $g(x) = 3x + 7$ and $f(x) = 2x - 4$ find rules for each of the following:

    a. $g(f(x))$ b. $f(g(x)$

6. If Z(Y) and Y(X) are defined as below, write a rule for Z(X).

    Z(Y) = 3Y + 5 and Y(X) = 5X

7. If $G(y) = 4y - 3$ and $F(y) = \dfrac{y+3}{4}$ find rules for each of the following:

    a. $G(F(y))$ b. $F(G(y))$

8. Solve for x:

    a. y = 2x − 3   b. y = (x +3)/2

9. A pair of functions y = f(x) and y = g(x) are called inverse functions provided for all values of x in their common domain g(f(x)) = f(g(x)) = x. Find rules for the inverses of each of the following functions.

    a. H(x) = 0.5x + 10   b. $K(y) = \dfrac{3}{y} + 4$