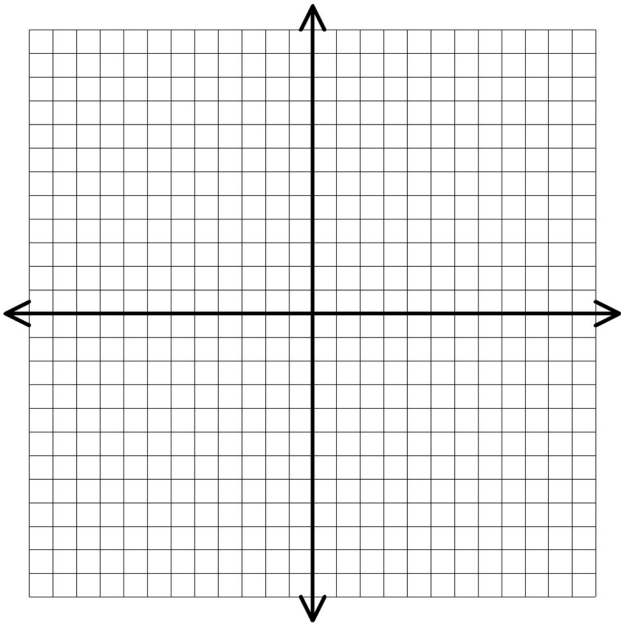


**Practice 3.1.2****Remember to show your work!**

3-32. Make a complete graph of a system of equations to solve:  $2|x - 4| = \frac{2}{3}x - 3$  Hint: graph each side of the equal sign separately and see where the two separate functions “meet” or “intersect”. Try to do this without using Desmos. Show your solutions clearly on your graph.



3-33. Solve each of the following equations using any method. Be sure to check your solutions.

a.  $-3\sqrt{2x - 5} + 7 = -8$

b.  $2|3x + 4| - 10 = 12$

3-34. If  $g(x) = x^2 - 5$ , determine:

a.  $g(\frac{1}{2})$

b.  $g(h + 1)$

3-36. Simplify each radical expression.

a.  $(3\sqrt{2})^2$

b.  $\sqrt{\frac{9}{4}}$

c.  $\sqrt{\frac{1}{3}}$

d.  $(3 + \sqrt{2})^2$

3-40. Solve the following equations. Be sure to check your solutions.

a.  $\sqrt{2x-1} - x = -8$

b.  $\sqrt{2x-1} - x = 0$

3-42. If  $p(x) = x^2+5x-6$

a. Where does the graph of  $y=p(x)$  intersect the y-axis?

b. Where does the graph of  $y=p(x)$  intersect the x-axis?

c. If  $q(x) = x^2+5x$ , what are the intercepts of the graph of  $y=q(x)$ ?

d. Compare the graphs of  $p(x)$  and  $q(x)$ .

e. What is  $p(x)-q(x)$ ?