

**Practice 3.2.2****Remember to show your work!**

3-92. Solve each of the following inequalities. Express the solutions algebraically and on a number line.

a.  $3x - 5 \leq 7$

b.  $x^2 + 6 > 42$



3-93. Simone has been absent and does not know the difference between the graph of  $y \leq 2x - 2$  and the graph of  $y < 2x - 2$ . Explain thoroughly so that she completely understands what points are excluded from the second graph and why.

3-94. When placed end-to-end, three red rods are 2 cm longer than two blue rods. Three blue rods are 2 cm longer than four red rods. How long is each rod? Write a system of equations and solve.

3-95. Solve each equation. Think about Rewriting, Looking Inside, or Undoing.

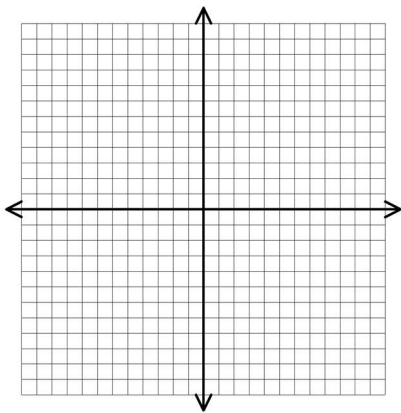
a.  $3(y + 1)^2 - 5 = 43$

b.  $\sqrt{1 - 4x} = 10$

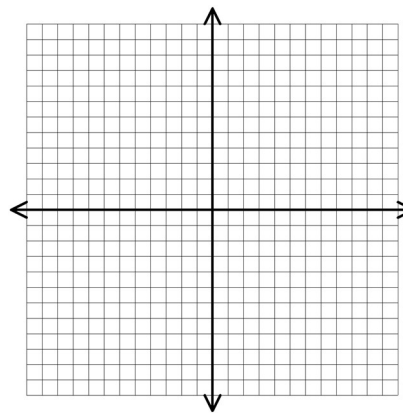
c.  $\frac{6y-1}{y} - 3 = 2$

d.  $\sqrt[3]{1 - 2x} = 3$

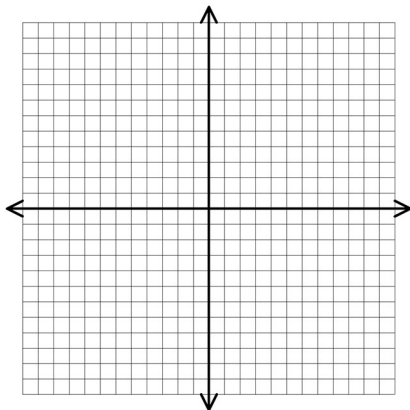
3-96. Sketch the graph of each of the following inequalities on a different set of axes.



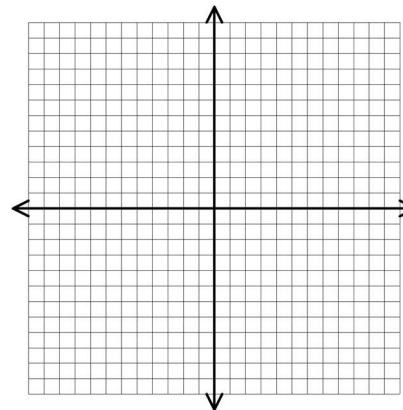
a.  $3x - 3 < y$



b.  $3 > y$



c.  $3x - 2y \leq 6$



d.  $x^2 - y \leq 9$