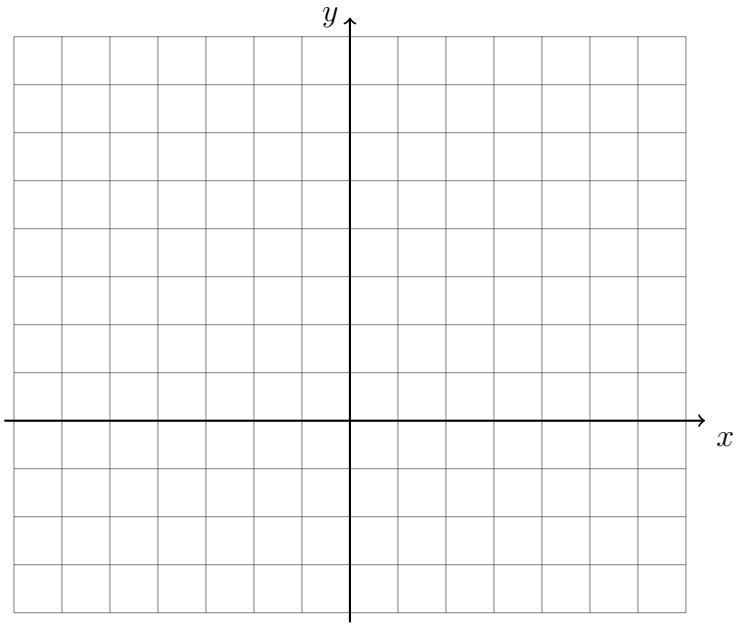
**11-1 Do Now: Using slope to prove theorems**

1. Graph and label the two equations. Mark their intersection as an ordered pair.

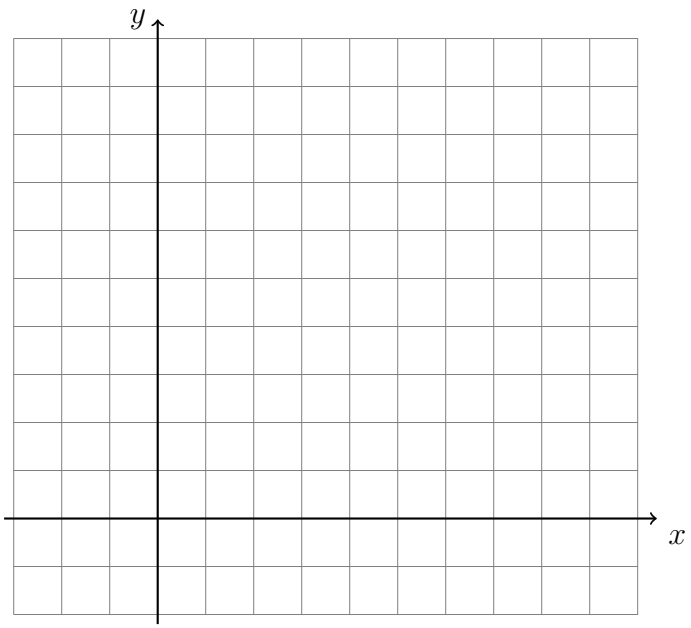
   $y = -2x + 3$ $2x - 4y = 8$

   Are the lines parallel, perpendicular, or neither? Justify your answer.




2. A translation of $x \to x + 2, y \to y - 4$ maps $\overline{AB} \to \overline{CD}$, with $A(-2, 0)$ and $B(0, 5)$. Find the slopes and $y$-intercepts of $\overleftrightarrow{AB}$ and $\overleftrightarrow{CD}$, and hence write down the equations of the two lines.

3. On the graph, draw $\triangle ABC$ with vertices A(-2, 1), B(9,-1), C(1, 5). Prove that $\triangle ABC$ is a right triangle by showing $\overline{AC} \perp \overline{BC}$. Complete the concluding statements given.




Segment $\overline{AC}$ and segment _____ are perpendicular so $\angle C$ is a _____ angle.

Angle _____ is a right angle so $\triangle ABC$ is a right triangle.