

Name:

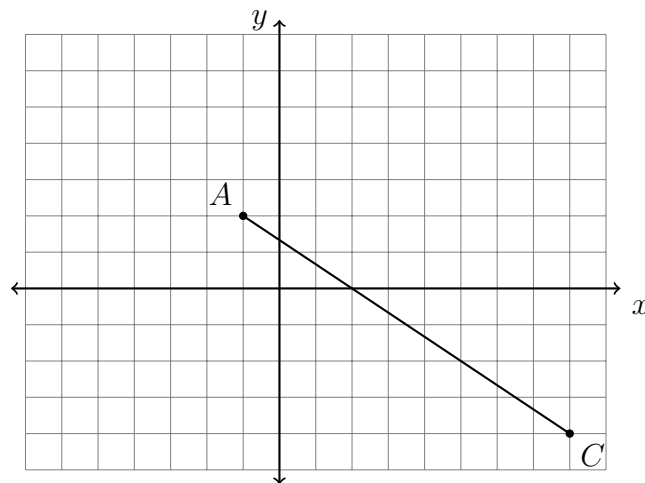
Homework: Coordinate geometry (due Thursday)

1. Find the length of \overline{DE} , where $D(1, -5)$ and $E(13, 0)$.

2. Determine relationship of each equation to the line $y = \frac{2}{3}x - 6$, circling either parallel, perpendicular, or neither.

(a) $2x - 3y = 6$	Parallel	Perpendicular	Neither
(b) $3x - 2y = 5$	Parallel	Perpendicular	Neither

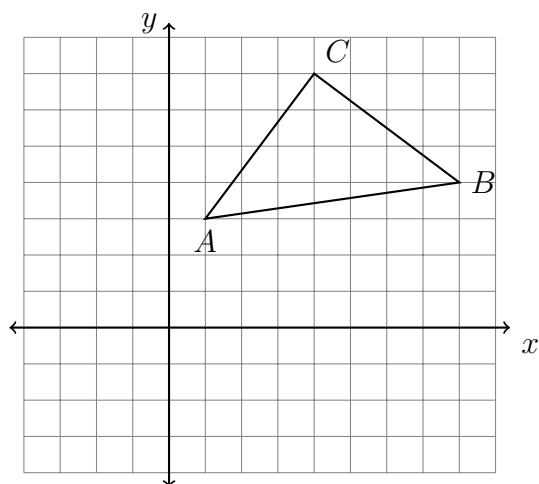
3. In the diagram below, \overleftrightarrow{AC} has endpoints with coordinates $A(-1, 2)$ and $C(8, -4)$.



If B is a point on \overline{AC} and $AB:BC = 1:2$, what are the coordinates of B ?

4. $A(2, 10)$ is one endpoint of \overline{AB} . The segment's midpoint is $M(5, 7)$. Find the other endpoint, B .

5. In the diagram below, $\triangle ABC$ has vertices with coordinates $A(1, 3)$, $B(8, 4)$ and $C(4, 7)$.



Find the length of each side of $\triangle ABC$, showing that it is isosceles and not equilateral.

$$\begin{array}{c} AC = \\ \sqrt{(x_C - x_A)^2 + (y_C - y_A)^2} \end{array} \left| \begin{array}{c} BC = \\ \sqrt{(x_C - x_B)^2 + (y_C - y_B)^2} \end{array} \right| \begin{array}{c} AB = \\ \sqrt{(x_B - x_A)^2 + (y_B - y_A)^2} \end{array}$$