Name:

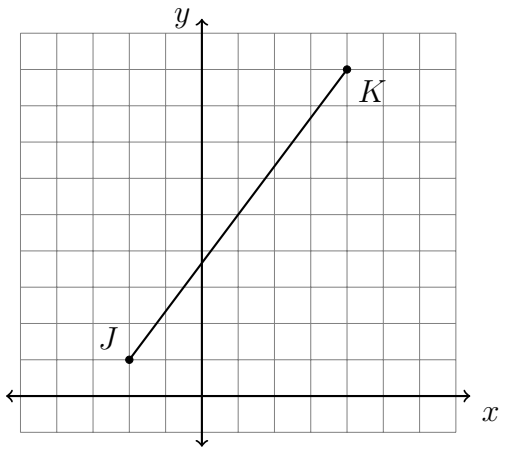
BECA / Dr. Huson / Geometry 04 Analytic Geometry

**4.4 Slope**

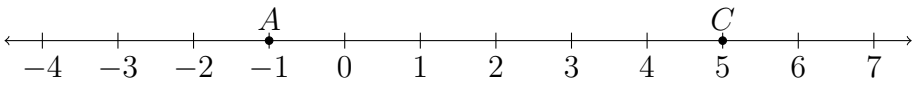
1. Do Now: In the diagram below, $\overline{JK}$ has endpoints $J(-2, 1)$ and $K(4, 9)$.

   (a) Find the coordinates of the midpoint $M$ of $\overline{JK}$. Mark and label it on the graph.

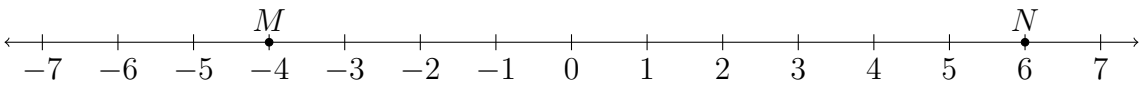
   (b) Find the length $JK$




2. The point $B$ is two thirds of the way from $A = -1$ to $C = 5$. Find the coordinate of $B$. Mark and label $B$ on the graph of $\overleftrightarrow{AC}$.



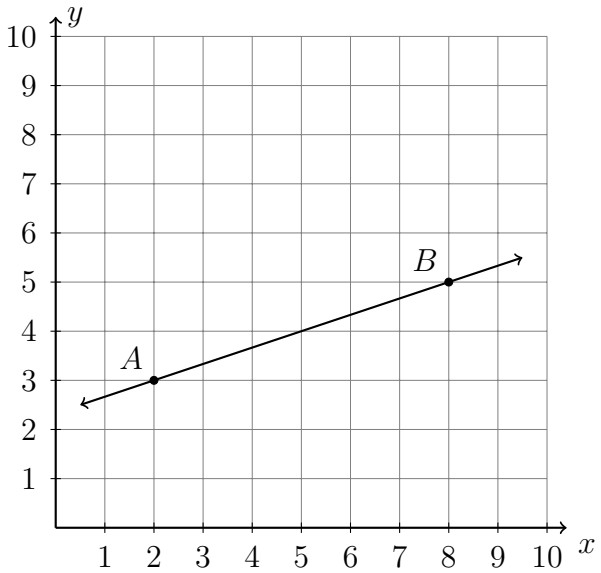

3. Point $P$ partitions $\overline{MN}$, $M = -4$ and $N = 6$, in the ratio $3 : 2$. Find the value of point $P$. Mark and label $P$ on the graph.



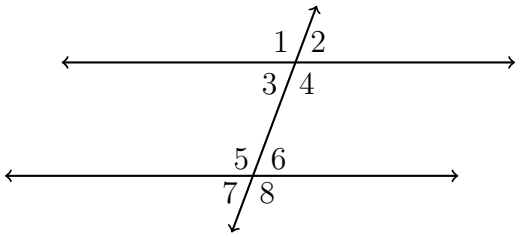
**The slope of a line**

"rise over run": $m = \dfrac{y_2 - y_1}{x_2 - x_1}$

4. Find the slope of the line through the points $A(2, 3)$, $B(8, 5)$.




5. Given two parallel lines and a transversal, as shown below.




(a) State the angle corresponding with $\angle 7$.

(b) What theorem would justify $m\angle 4 + m\angle 6 = 180°$? _____

(c) What theorem would justify $\angle 3 \cong \angle 6$? _____

(d) Given $m\angle 1 = 117°$ and $m\angle 8 = (4x - 3)°$. Find $x$.