Warm Up

$A(5,-2)$ $B(-1,6)$ $C(7,-2)$ $D(-3,2)$

x y x y x y x y

1) Find the slope of AB $\frac{6-(-2)}{-1-5} = \frac{8}{-6} = -\frac{4}{3}$

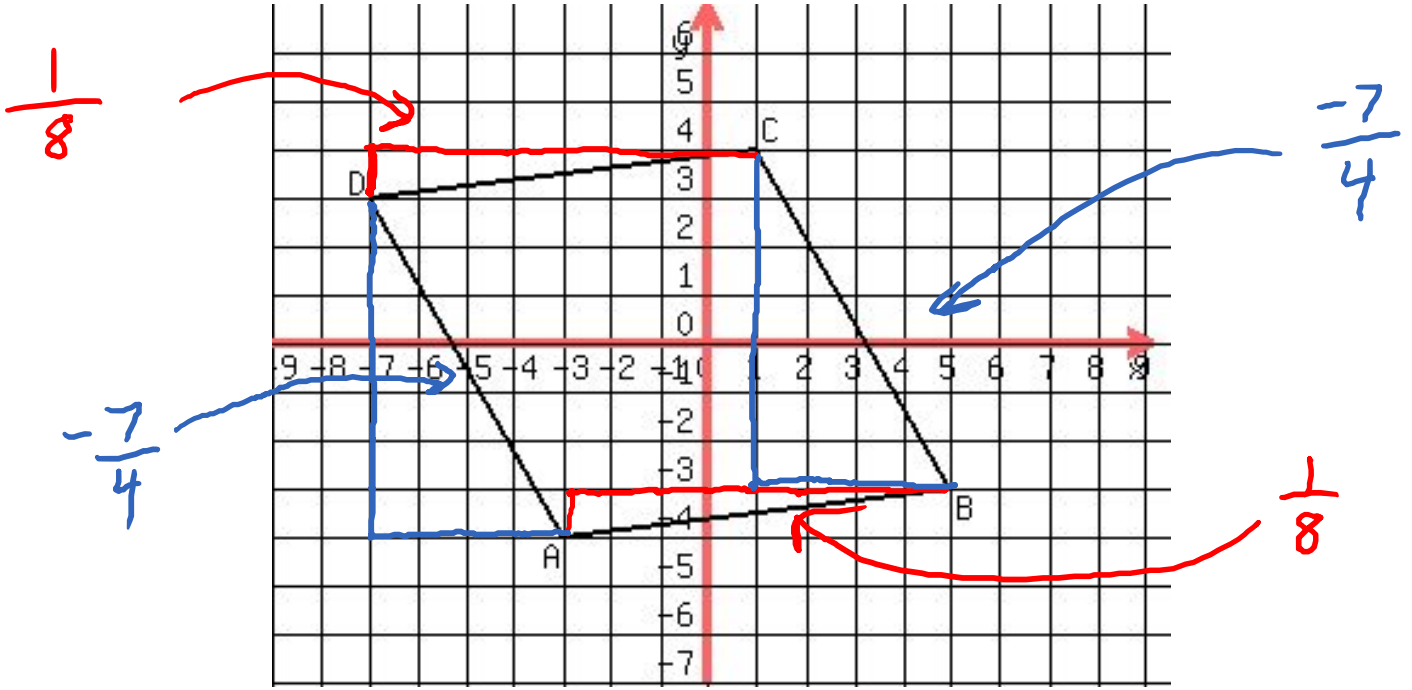
2) Find the slope of CD $\frac{-2-2}{7-(-3)} = \frac{-4}{10} = \frac{-2}{5}$

3) Find the slope of AC $\frac{-2-(-2)}{5-7} = \frac{0}{-2} = 0$

4) Find the slope of BD $\frac{2-6}{-3-(-1)} = \frac{-4}{-2} = 2$

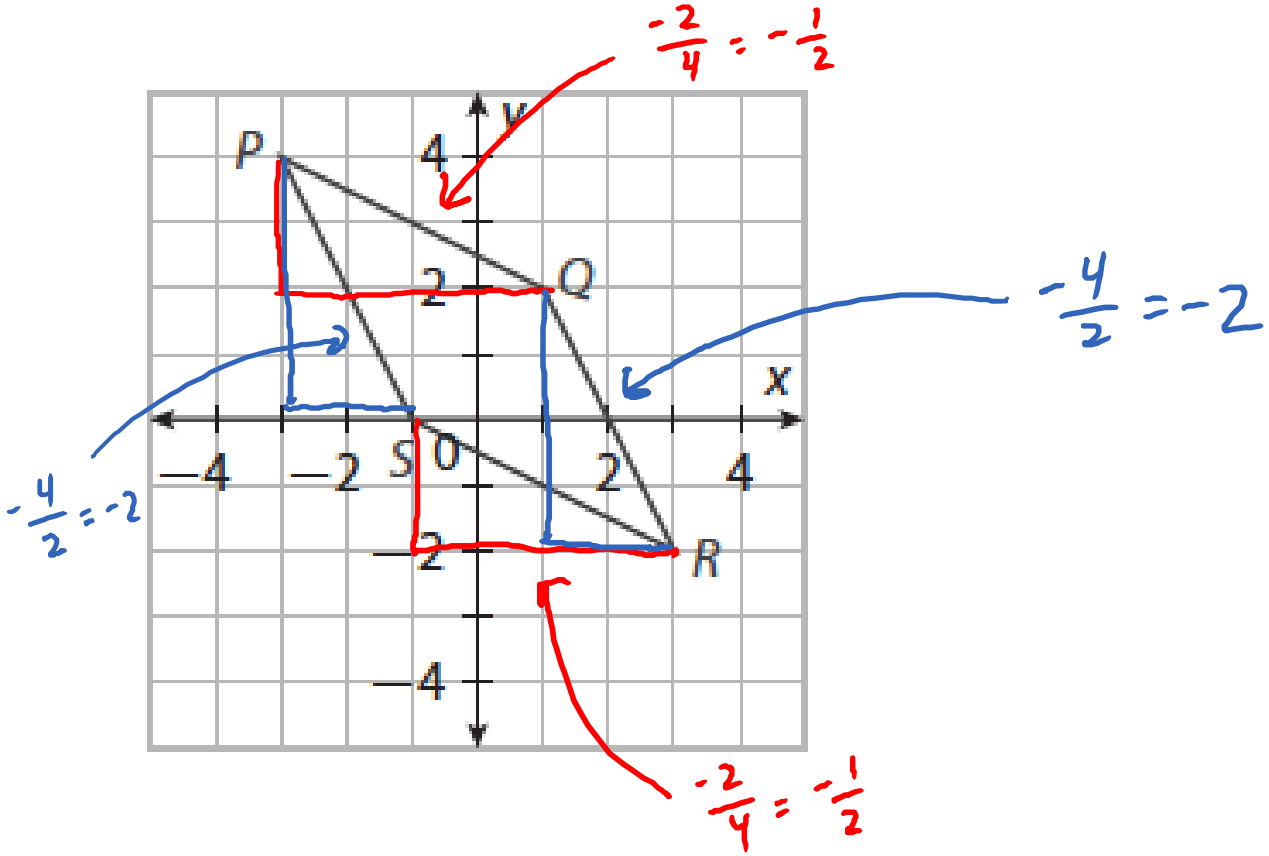
10.1 Slope and Parallel Lines

Is $ABCD$ a parallelogram? Why?



Remember, parallel lines have the same slope.

Ex. Show that $PQRS$ is a parallelogram.



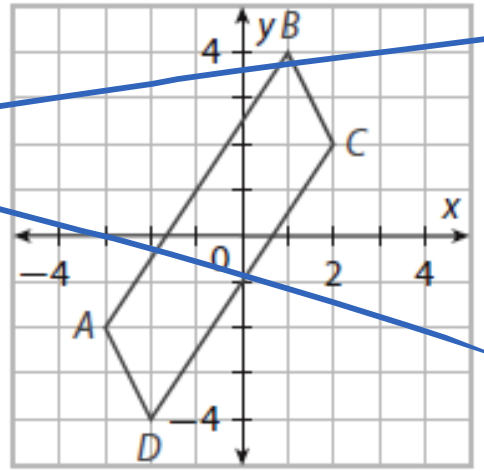
Ex. Show that $JKLM$ is a trapezoid.

$\frac{-2}{6} = \frac{-1}{3}$

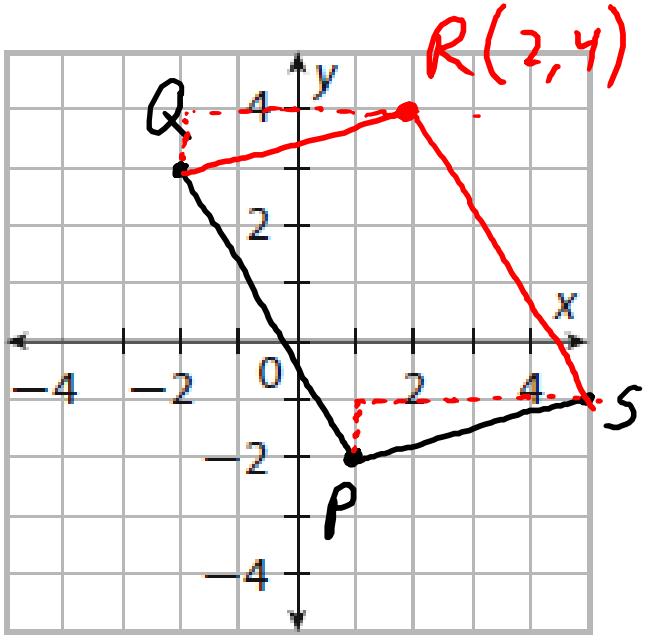
$\frac{-1}{3}$

trapezoid

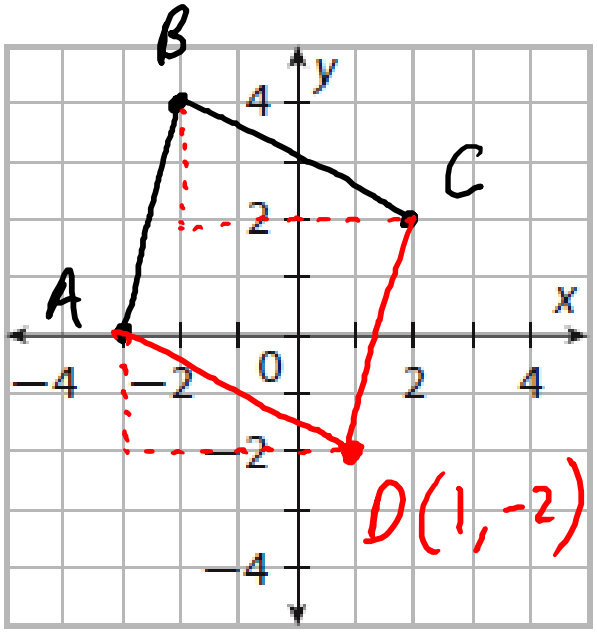
Ex. Show that $ABCD$ is a parallelogram.



Ex. Find the missing vertex of parallelogram $PQRS$ with vertices $P(1,-2)$, $Q(-2,3)$, and $S(5,-1)$.



Ex. Find the missing vertex of parallelogram $ABCD$ with vertices $A(-3,0)$, $B(-2,4)$, and $C(2,2)$.



Ex. Find the missing vertex of parallelogram $LMNP$ with vertices $M(-2,2)$, $N(4,1)$, and $P(3,-2)$.