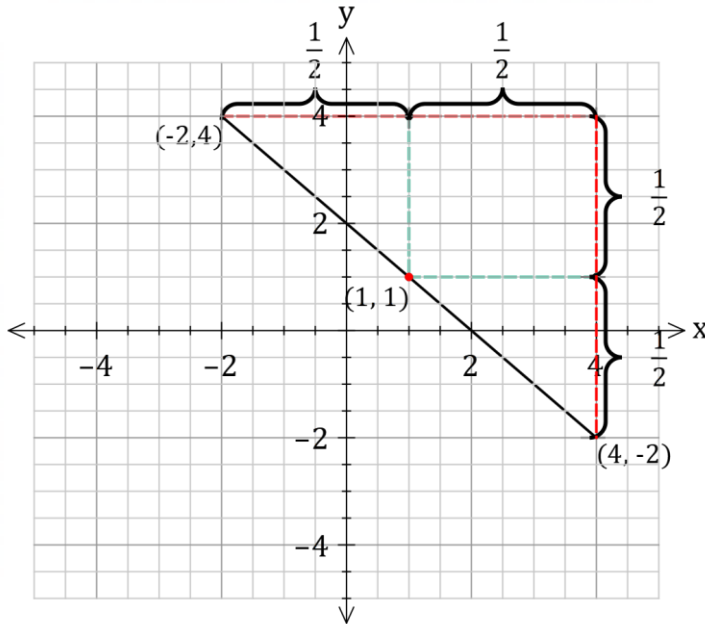


Midpoint

Find the midpoint of the line segment between the points $(-2, 4)$ and $(4, -2)$.



As you can see, the midpoint is halfway between the x and y co-ordinates.

To generalise, the midpoint is

$$\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$$

Example

Find the midpoint between the points $A(-3, -1)$ and $B(1, 5)$

$$\begin{aligned} & \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right) \\ &= \left(\frac{-3 + 1}{2}, \frac{-1 + 5}{2} \right) \\ &= \left(-\frac{2}{2}, \frac{4}{2} \right) \\ &= (-1, 2) \end{aligned}$$