

Mid Point

Sometimes you need to find the point that is exactly between two other points. For instance, you might need to find a line that bisects (divides into equal halves) a given line segment. This middle point is called the "midpoint". The concept doesn't come up often, but the Formula is quite simple and obvious, so you should remember it for later.

Think about it this way: If you are given two numbers, you can find the number exactly between them by averaging them, by adding them together and dividing by two. For example, the number exactly halfway between 5 and 10 is $[5 + 10]/2 = 15/2 = 7.5$.

Find the midpoint between (-1, 2) and (3, -6).

$$\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}$$

$$\frac{-1+3}{2}, \frac{2+ -6}{2} \quad \frac{2}{2}, \frac{-4}{2} \quad \text{or } P = 1, -2$$