# 16. Midpoint Formula

Exercises

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The formula for the midpoint between two points can be expressed as:

**In words:** Average the x-coordinates of the points and the y-coordinates.

**In a formula:** If $(x_1, y_1)$ is a point and $(x_2, y_2)$ is another point their midpoint is given by:

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

## Exercises

Find the midpoint of

1. $(0, 0)$ and $(6, 10)$
2. $(4, 8)$ and $(0, 0)$
3. $(1, 3)$ and $(5, 9)$
4. $(5, 7)$ and $(1, 7)$
5. $(-2, 3)$ and $(6, 1)$
6. $(1, 4)$ and $(4, 6)$
7. $(-10, -5)$ and $(-5, 1)$

## 16. Midpoint Formula Answers

1. $(3, 5)$
2. $(2, 4)$
3. $(3, 6)$
4. $(4, 7)$
5. $(2, 1)$
6. $(2.5, 5)$
7. $(7.5, -2)$