

Geometry Note-Taking Guide

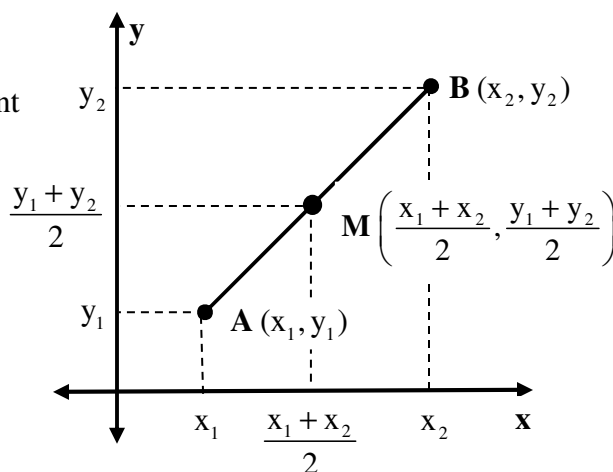
SECTION 1.6 – Midpoint Formula

A _____ is a point on a segment that _____ (cuts in half) the segment.

The Midpoint Formula

The coordinate of the midpoint M of the segment with endpoints A (x_1, y_1) and B (x_2, y_2) is

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



Ex 1:

a) Find the coordinates of the midpoint of a segment with the given endpoints.

$$A(1, 7) \quad B(3, -1)$$

b) Find the coordinates of the midpoint of \overline{AB} with the given endpoints A(-6, 5) and B(2, -4).

Ex 2:

a) Find the coordinates of the other endpoint of the segment \overline{AB} with the given endpoint and midpoint.

$$A(-8, -1) \quad M(0, 3)$$

b) Find an endpoint A(2, -3) and the midpoint $M\left(3, -\frac{1}{2}\right)$ of \overline{AB} , find the coordinates of the other endpoint B.