Your name

Mrs. Theo

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Midpoint and Median

Notes

Midpoint Formula

The midpoint of a segment can be found using the formula:

a line with two endpoints

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

Capital for points

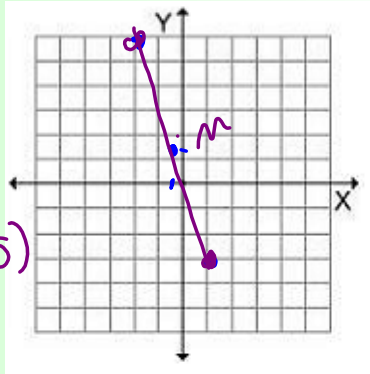
Average of x-values

Average of y-values

Example: Find the midpoint of a segment with endpoints at (1,-3) and (-2,6).

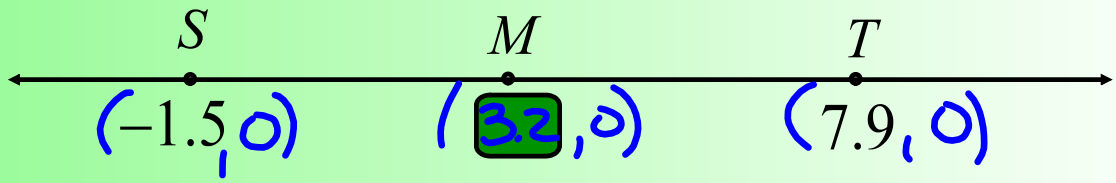
$\left(\frac{1+-2}{2}, \frac{-3+6}{2}\right)$

$\left(-\frac{1}{2}, \frac{3}{2}\right)$ or $(-0.5, 1.5)$



Midpoint Formula

2.) Find the coordinate of the midpoint, M, of segment ST.

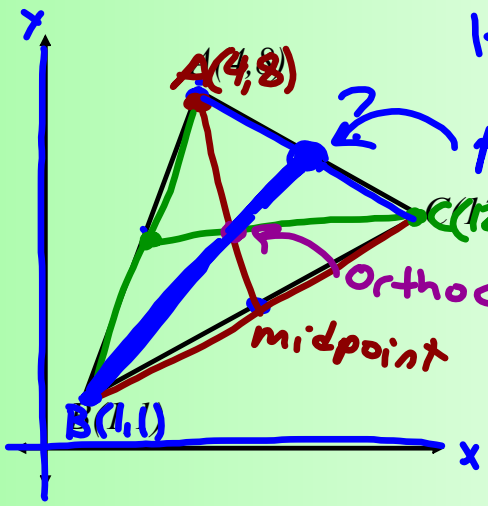


$\frac{-1.5+7.9}{2}, \frac{0+0}{2}$

$(3.2, 0)$

median is a segment starting at one vertex of a triangle and ending at the midpoint of the opposite side.

Find the slope of the **median** of triangle ABC that goes to side AC.



1st $\left(\frac{4+12}{2}, \frac{8+6}{2}\right)$

Midpoint (8,7)

2nd $m: \frac{7-1}{8-1} = \frac{6}{7}$

$m = \frac{y_2-y_1}{x_2-x_1}$

2 points