

Length of a line

The length of a line is the square root of the difference in X coordinates squared minus the difference in Y coordinates squared.

$$\sqrt{(X_1 - X_2)^2 - (Y_1 - Y_2)^2}$$

e.g. $\sqrt{(2 - 6)^2 - (3 - 2)^2}$

$$\sqrt{(-4)^2 - 1^2}$$

$$\sqrt{16 - 1}$$

$$= 3.8729....$$

$$= 3.87$$

Mid-point

The midpoint is found by adding the X coordinates and dividing by 2 and adding the Y coordinates and dividing by 2.

$$((X_1 + X_2) \div 2, (Y_1 + Y_2) \div 2)$$

$$\frac{2 + 6}{2}, \frac{3 + 2}{2} = (4, 2.5)$$

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