

Warmup 1: Distance and Midpoint (Review)

Use points $(4,4)$ & $(7,8)$

a) find the distance between

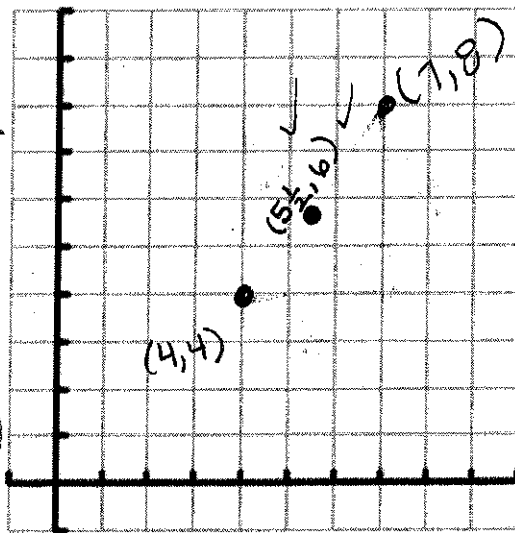
the two points. $D = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$

$$\begin{aligned} \sqrt{(7-4)^2 + (8-4)^2} &= \sqrt{3^2 + 4^2} \\ &= \sqrt{9 + 16} = \sqrt{25} = 5 \end{aligned}$$

b) find the midpoint between

the two points. $\text{midpt} = \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$

$$\left(\frac{4+7}{2}, \frac{4+8}{2} \right) = \left(\frac{11}{2}, \frac{12}{2} \right) = \left(5\frac{1}{2}, 6 \right)$$



c) graph the two points to verify your answers to parts a & b