

Date: 04-02-2019

$$d = \sqrt{5 - (-1)^2 + (4-2)^2} = \sqrt{6^2 + 12^2}$$

mid point formula :

$$\begin{aligned} \text{mid} &= \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right) \\ &= \left(\frac{4 + 10}{2}, \frac{5 + 13}{2} \right) \\ &= \left(\frac{14}{2}, \frac{18}{2} \right) \\ &= (7, 9) \end{aligned}$$

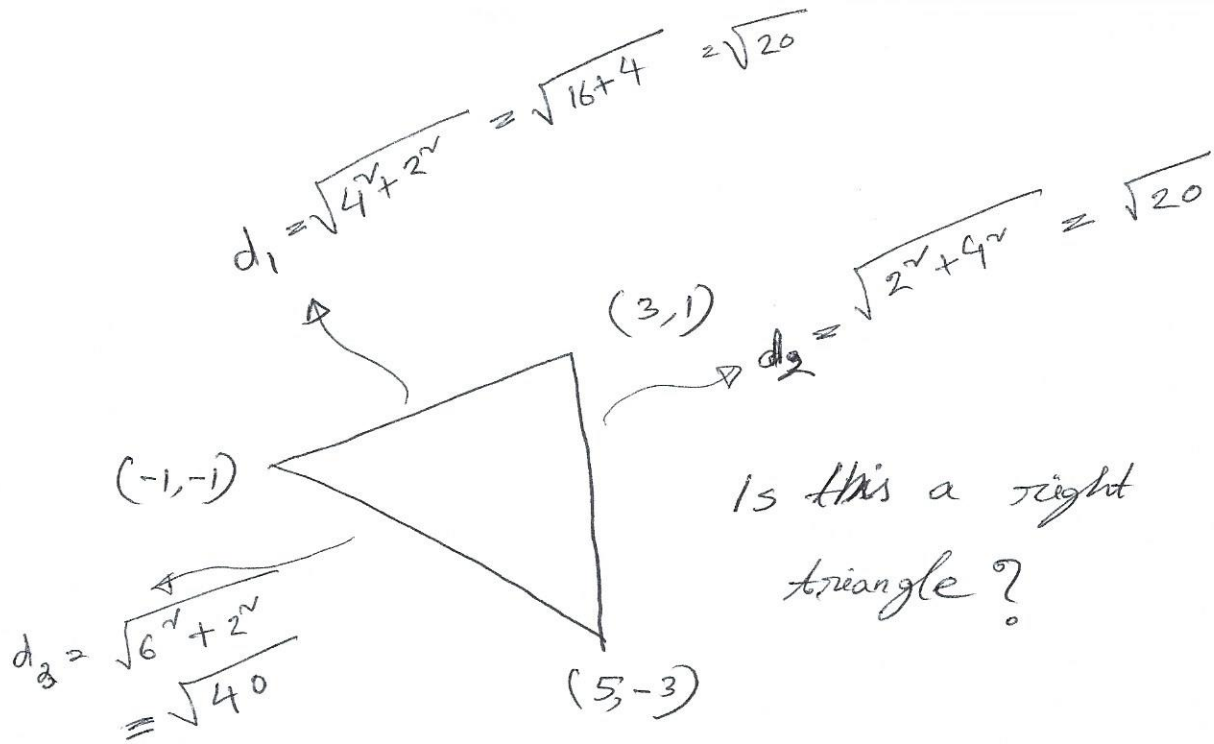
Every line segment has a mid point. True

Triangle with sides 9, 12, 15 is a Rt Δ

$$9^2 + 12^2 \stackrel{?}{=} 15^2$$

$$\Rightarrow 81 + 144 \stackrel{?}{=} 225$$

$$\Rightarrow 225 = 225 \quad \checkmark$$



1. Isosceles - 2 sides equal
2. Scalene - No sides equal
3. Right triangle - right \angle
4. Equilateral Δ - All sides equal.

$$\Delta \quad (\sqrt{20})^2 + (\sqrt{20})^2 = (\sqrt{40})^2$$

$$\Rightarrow 20 + 20 = 40$$

$$\Rightarrow 40 = 40 \quad \checkmark$$

So, this is a right triangle.