

1. Slope

$$m = \frac{20}{16} = \frac{5}{4}$$

$$y = \frac{5}{4}x$$

2. Points

$$(x_1, y_1) = (11.4, 15.2)$$

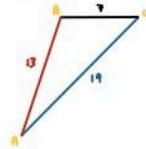
$$(x_2, y_2) = (7.8, 10.4)$$

3. Distances

$$(0,0) \rightarrow (11.4, 15.2) = 19 \text{ cm}$$

$$(0,0) \rightarrow (15, 20) = 25 \text{ cm}$$

4. Angles



$$\cos A = \frac{b^2 + c^2 - a^2}{2bc}$$

$$= \frac{14^2 + 19^2 - 13^2}{2 \cdot 14 \cdot 19}$$

$$= \frac{27}{38}$$

$$A = 13.17^\circ$$

$$\cos B = \frac{c^2 + a^2 - b^2}{2ac}$$

$$= \frac{19^2 + 13^2 - 14^2}{2 \cdot 19 \cdot 13}$$

$$\cos B = -\frac{11}{14}$$

$$B = 141.79^\circ$$

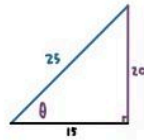
$$\cos C = \frac{a^2 + b^2 - c^2}{2ab}$$

$$= \frac{13^2 + 14^2 - 19^2}{2 \cdot 13 \cdot 14}$$

$$\cos C = \frac{241}{200}$$

$$C = 25.04^\circ$$

5. Final Angles



$$\cos \theta = \frac{15}{25}$$

$$\theta = 53.13^\circ$$

$$53.13 + 13.17 = 46.3^\circ$$

$$180 - 25.04 = 154.96^\circ$$

6. Final Diagram

