

11-22-19 2nd Geo

State if the following could be real lengths of the sides of $\triangle S$.

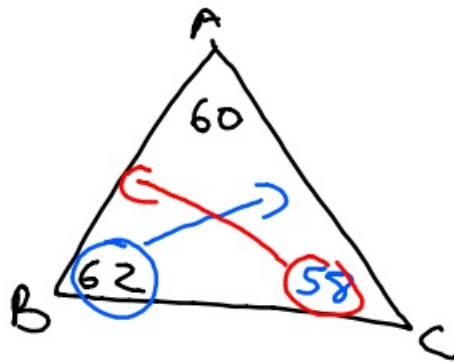
① $\boxed{4, 8, 12}$ $\begin{matrix} 4 \\ 8-4 \end{matrix}$ $\begin{matrix} 12 \\ 8+4 \end{matrix}$ No

② $5, 6, 9$ $\begin{matrix} 1 \\ 11 \end{matrix}$ Yes

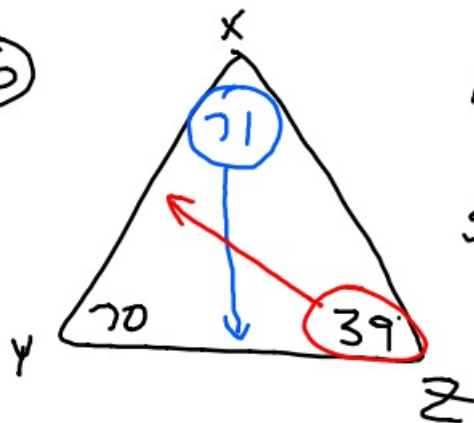
③ $\textcircled{3, 3, 3}$ Eq. \checkmark $\begin{matrix} 0 \\ 6 \end{matrix}$ Yes

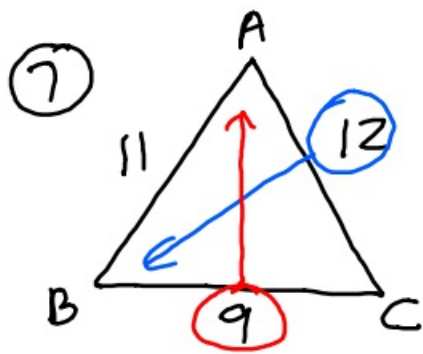
④ $\textcircled{1, 8, 9}$ $\begin{matrix} 7 \\ 9 \end{matrix}$ No

⑤ Longest side AC Shortest side AB

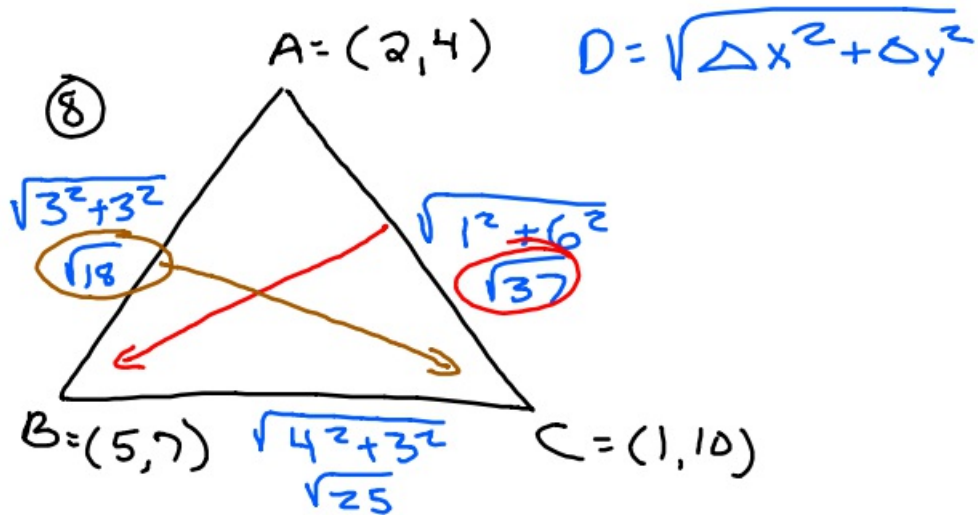


⑥ Longest side = YZ
Shortest side = XY

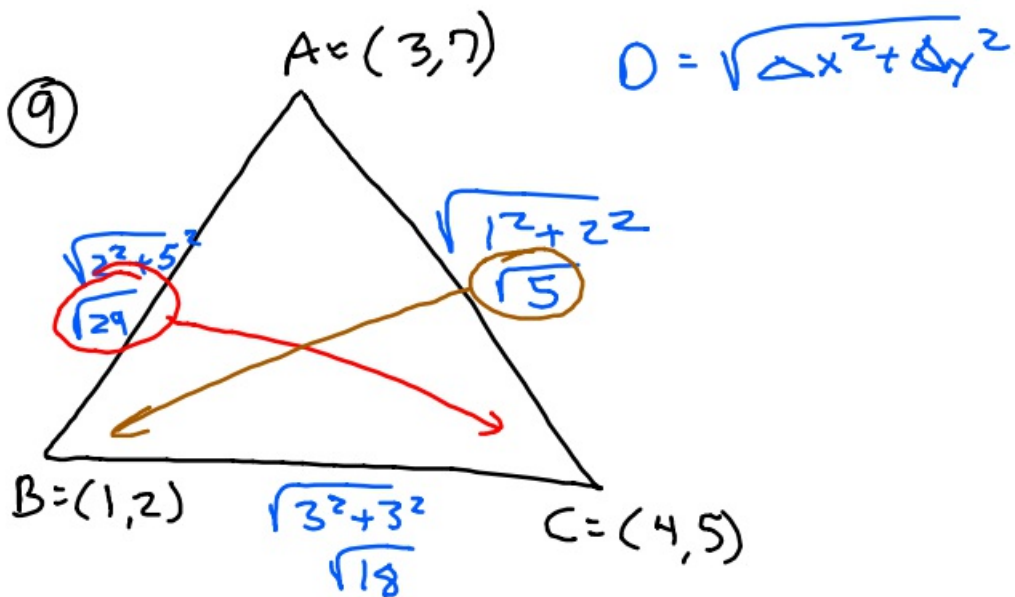




Largest $\angle = \angle B$
 Smallest $\angle = \angle A$

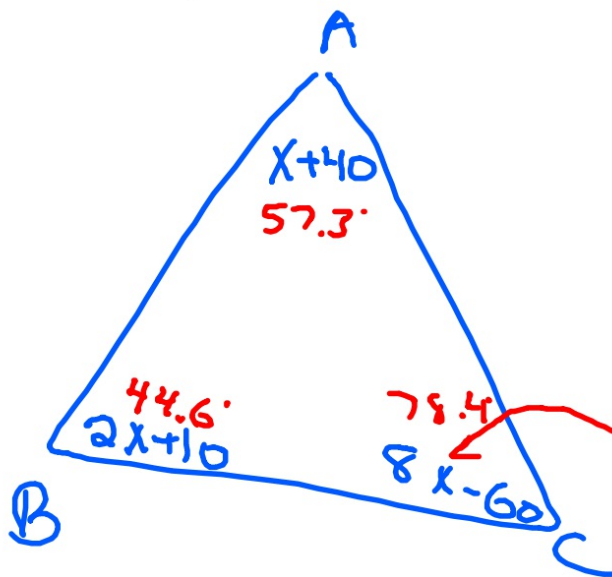


Largest $\angle = \angle B$
 Shortest $\angle = \angle C$



Largest $\angle = \angle C$
 Shortest $\angle = \angle B$

- ⑩ Find the shortest and longest side if in $\triangle ABC$, $\angle A = x + 40$
 $\angle B = 2x + 10$, and $\angle C = 8x - 60$.



$$x + 40 + 2x + 10 + 8x - 60 = 180$$

$$\begin{array}{r} 11x - 10 = 180 \\ +10 \quad +10 \\ \hline \end{array}$$

$$\frac{11x}{11} = \frac{190}{11}$$

$$x = 17.3$$

Longest side = \overline{AB}

Shortest side = \overline{AC}