

25 This triangle is of the form ASA. There is only one solution.

$$\beta = 180^\circ - 55.2^\circ - 114.8^\circ = 10^\circ$$

$$\frac{a}{\sin \alpha} = \frac{b}{\sin \beta} \Rightarrow a = \frac{b \sin \alpha}{\sin \beta} = \frac{19.5 \sin 55.2^\circ}{\sin 10^\circ} \approx 92.2$$

$$\frac{c}{\sin \gamma} = \frac{b}{\sin \beta} \Rightarrow c = \frac{b \sin \gamma}{\sin \beta} = \frac{19.5 \sin 114.8^\circ}{\sin 10^\circ} \approx 101.9$$

$$\beta = 10^\circ, \quad a \approx 92.2, \quad c \approx 102$$