

Exercises 7.4

$$1. \quad \angle C = 180^\circ - 52^\circ - 70^\circ = 58^\circ. \quad x = \frac{23.1 \cdot \sin 52^\circ}{\sin 58^\circ} \approx 21.5$$

$$3. \quad \angle C = 180^\circ - 37.5^\circ - 28.1^\circ = 114.4^\circ. \quad x = \frac{90 \cdot \sin 114.4^\circ}{\sin 37.5^\circ} \approx 134.6$$

$$5. \quad \sin \theta = \frac{24 \cdot \sin 120^\circ}{30} \approx 0.693 \quad \Leftrightarrow \quad \angle C \approx \sin^{-1} 0.693 \approx 44^\circ.$$

$$7. \quad \angle C = 180^\circ - 46^\circ - 20^\circ = 114^\circ. \quad \text{Then } a = \frac{65 \cdot \sin 46^\circ}{\sin 114^\circ} \approx 51 \text{ and } b = \frac{65 \cdot \sin 20^\circ}{\sin 114^\circ} \approx 24.$$