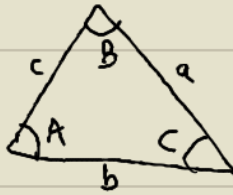


LAW OF SINES

$$\frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c}$$



$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

1. $B = 35^\circ$
 $A = 45^\circ$
 $c = 7$

ANGLE C

$$C = 180^\circ - A - B$$

$$C = 180^\circ - 45^\circ - 35^\circ$$

$$C = 100^\circ$$

a

$$\frac{a}{\sin A} = \frac{c}{\sin C}$$

$$\frac{a}{\sin 45^\circ} = \frac{7}{\sin 100^\circ}$$

$$a = \frac{7 \sin 45^\circ}{\sin 100^\circ}$$

$$a = 5.03$$

b

$$\frac{b}{\sin B} = \frac{c}{\sin C}$$

$$\frac{b}{\sin 35^\circ} = \frac{7}{\sin 100^\circ}$$

$$b = \frac{7 \sin 35^\circ}{\sin 100^\circ}$$

$$b = 4.08$$

2. $B = 20^\circ$
 $b = 8$
 $C = 110^\circ$

ANGLE A

$$A = 180^\circ - B - C$$

$$A = 180^\circ - 20^\circ - 110^\circ$$

$$A = 50^\circ$$

a

$$\frac{a}{\sin A} = \frac{b}{\sin B}$$

$$\frac{a}{\sin 50^\circ} = \frac{8}{\sin 20^\circ}$$

$$a = \frac{8 \sin 50^\circ}{\sin 20^\circ}$$

$$a = 17.92$$

c

$$\frac{c}{\sin C} = \frac{b}{\sin B}$$

$$\frac{c}{\sin 110^\circ} = \frac{8}{\sin 20^\circ}$$

$$c = \frac{8 \sin 110^\circ}{\sin 20^\circ}$$

$$c = 21.98$$

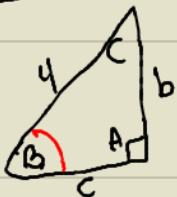
3. $B = 30^\circ$, $a = 4$, $C = 60^\circ$

A

$$A = 180^\circ - B - C$$

$$A = 180^\circ - 30^\circ - 60^\circ$$

$$A = 90^\circ$$



b

$$\sin B = \frac{\text{opp}}{\text{hyp}}$$

$$\sin 30^\circ = \frac{b}{4}$$

$$4 \sin 30^\circ = b$$

$$b = 2$$

c

$$a^2 + b^2 = c^2$$

$$4^2 + 2^2 = c^2$$

$$16 + 4 = c^2$$

$$20 = c^2$$

$$\sqrt{20} = c$$

$$c = \sqrt{20} = 2\sqrt{5}$$

$$c = 2\sqrt{5}$$

$$c = 4.47$$