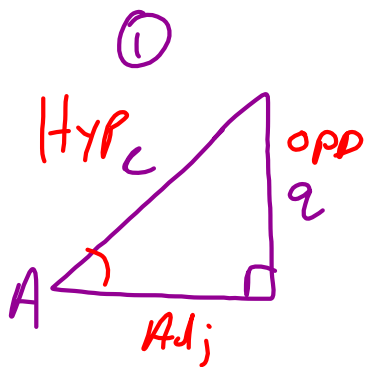
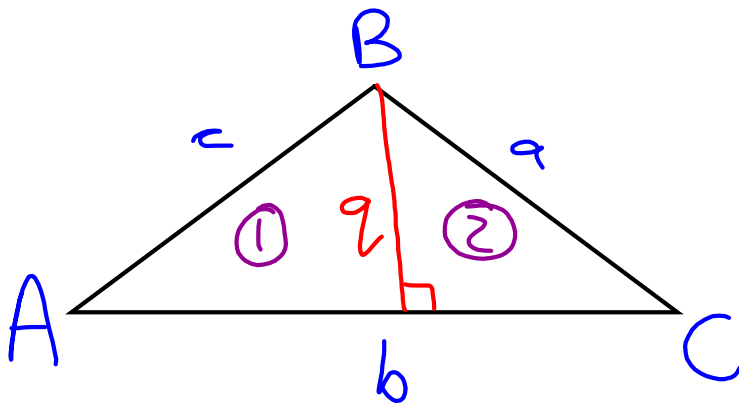
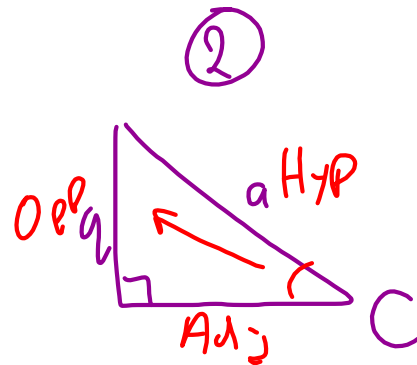


Sine Law



$$\sin A = \frac{q}{c}$$

$$c \sin A = q$$



$$\sin C = \frac{q}{a}$$

$$a \sin C = q$$

∴ since q is the same for both triangles

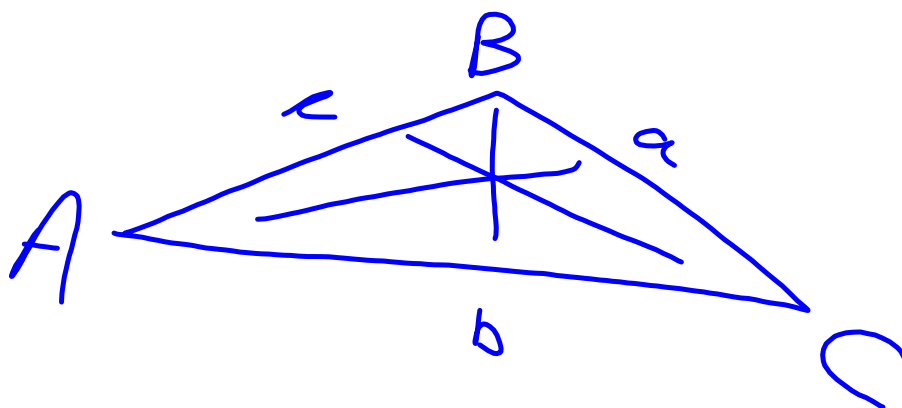
$$\frac{c \sin A}{c} = \frac{a \sin C}{a}$$

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

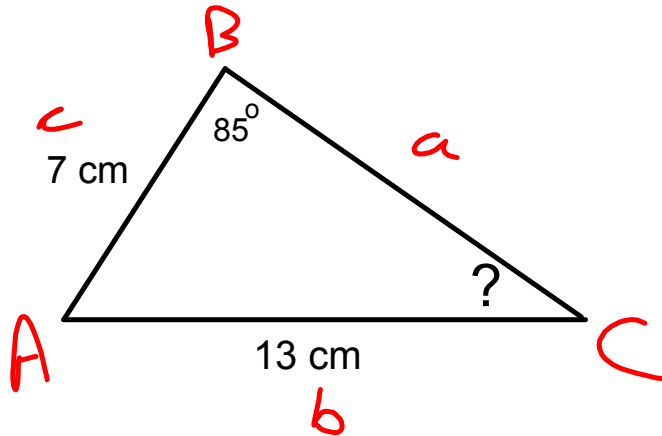
Sine Law

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

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



Determine the measure of the angle



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

$$\cancel{\frac{\sin A}{a}} = \frac{\sin 85}{13} = \frac{\sin ?}{7}$$

$$\frac{\sin 85}{13} = \frac{\sin X}{7}$$

$$\frac{0.9962}{13} = \frac{\sin X}{7}$$

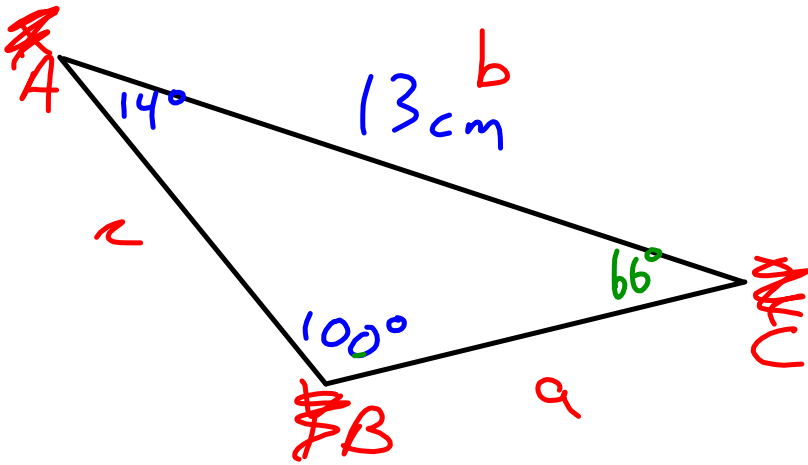
$$0.0766 = \frac{\sin X}{7}$$

$$0.5364 = \sin X$$

$$32^\circ = X$$

$$\therefore \angle C = 32^\circ$$

Solve the Triangle



$$180 - 100 - 14 = 66^\circ$$

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

$$\frac{\sin 14}{a} = \frac{\sin 100}{13} = \frac{\sin 66}{c}$$

$$\frac{\sin 14}{a} = \frac{\sin 100}{13}$$

$$\frac{\sin 100}{13} = \frac{\sin 66}{c}$$

$$\frac{13 \times 0.2419}{a} = \frac{0.9848}{13} \quad a \times 13$$

$$\frac{0.9848}{13} = \frac{0.9135}{c}$$

$$\frac{13 \times 0.2419}{0.9848} = \frac{0.9848}{0.9848} a$$

$$12.1 = c$$

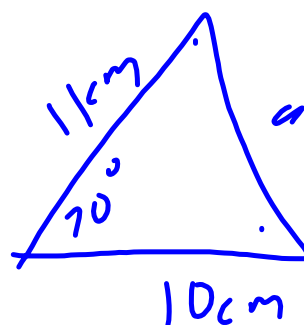
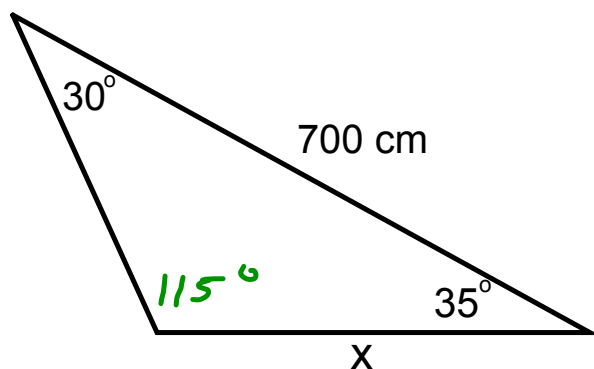
$$3.2 = a$$

In $\triangle PQR$, $\angle P = 118$, $p = 38$ mm, and $q = 24$ mm.

Draw and label a diagram

Determine the measurement of $\angle R$

Can we use the Sine Law?



$$180 - 30 - 35 \\ = 115$$

Homework

pg. 433 # 3, 4, 7, 8, 13