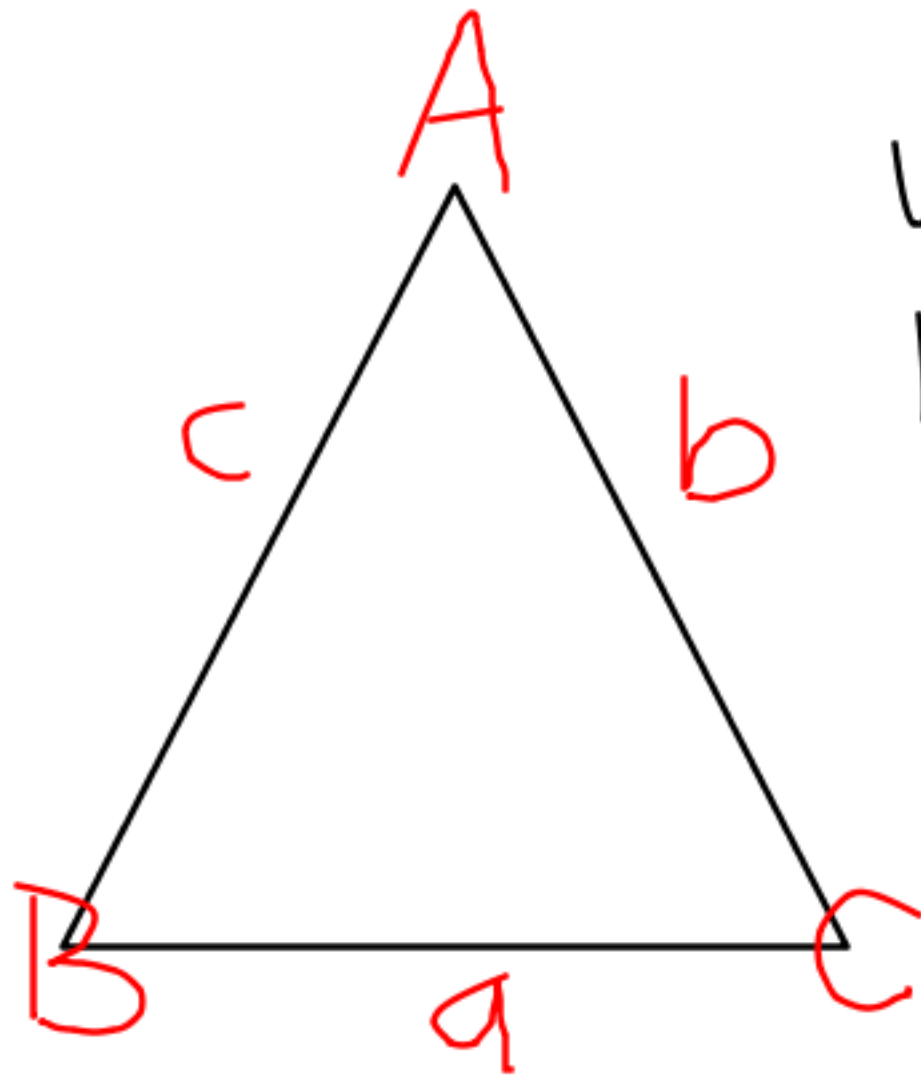


Law of Sines Review

Sept 21



uppercase letters = angles
Lowercase letters = sides

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

You must have corresponding sides to

use sine law, and your unknown is

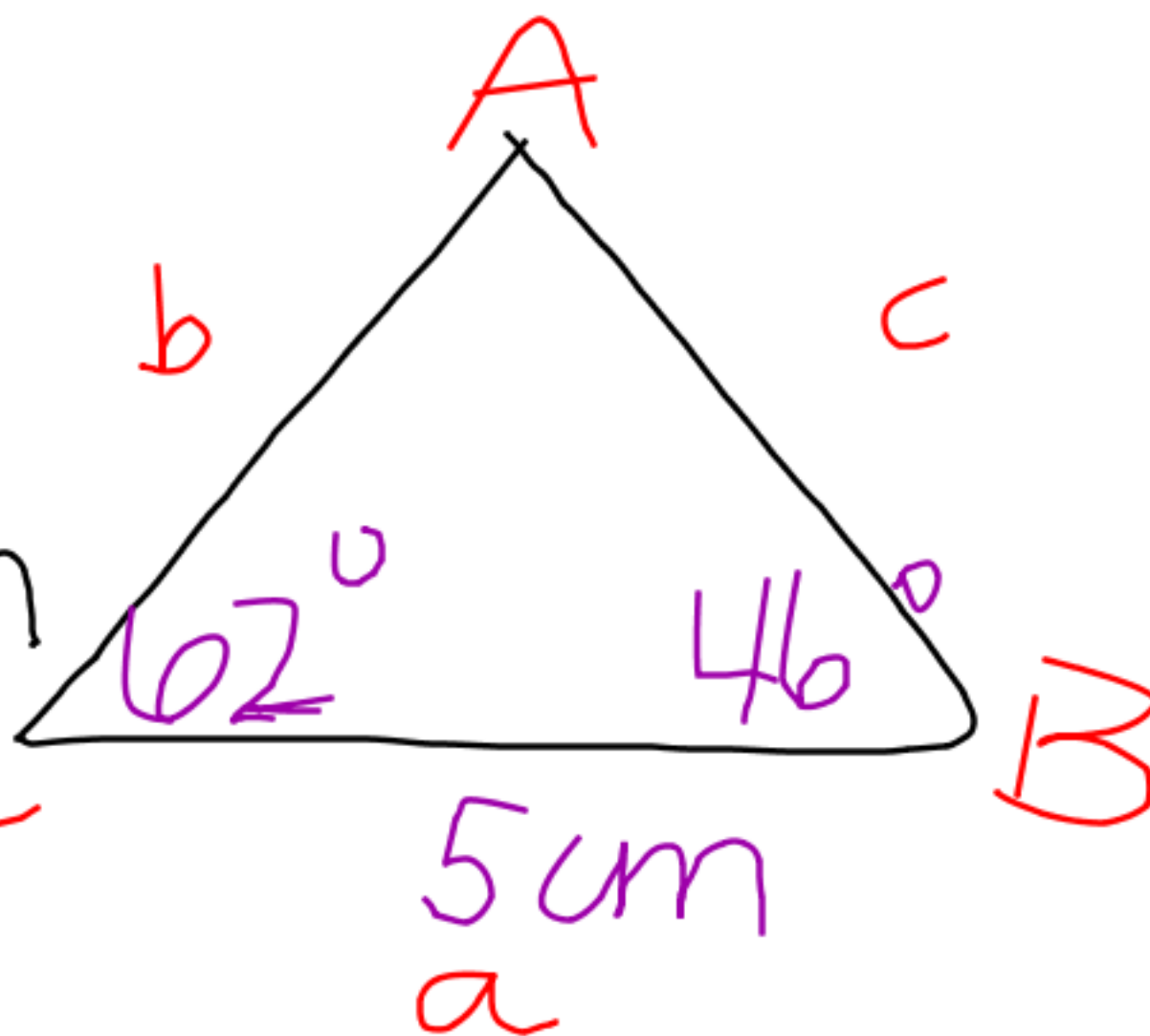
always written on the TOP RIGHT!

1) $\triangle ABC$

$$\angle A = 72^\circ \quad a = 5 \text{ cm}$$

$$\angle B = 46^\circ \quad b = 3.8 \text{ cm}$$

$$\angle C = 62^\circ \quad c = 4.6 \text{ cm}$$



$$\triangle = 180^\circ$$

$$\angle A = 180 - 46 - 62$$

$$= 72^\circ$$

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

$$\frac{5}{\sin 72} = \frac{b}{\sin 46}$$

$$b = 3.78 \text{ cm}$$

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

$$\frac{5}{\sin 72} = \frac{c}{\sin 62}$$

$$c = 4.641$$

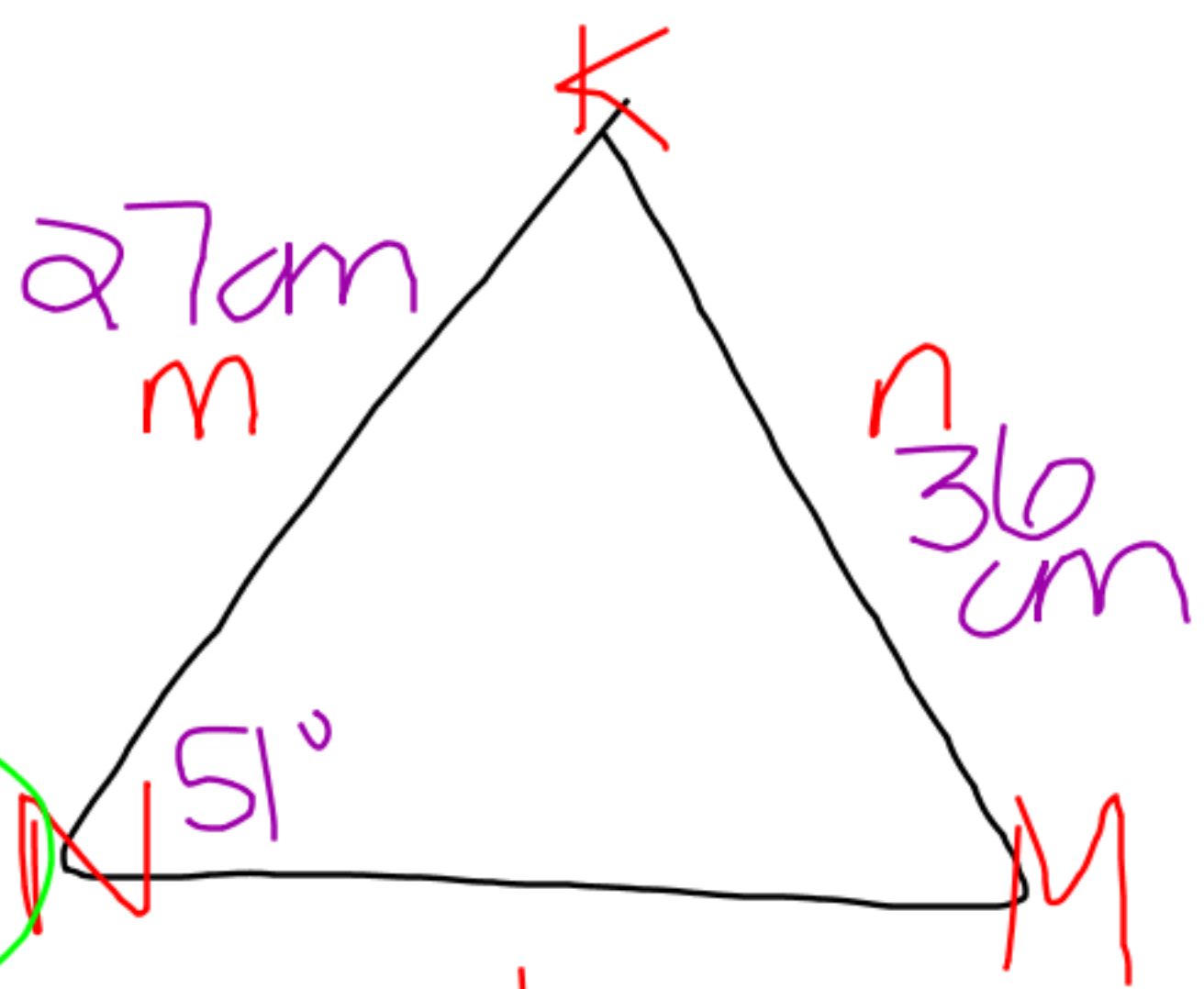
$$c = 4.6 \text{ cm}$$

4) $\triangle KMN$

$$\angle K = 93^\circ \quad k = 46.3 \text{ cm}$$

$$\angle M = 36^\circ \quad m = 27 \text{ cm}$$

$$\angle N = 51^\circ \quad n = 36 \text{ cm}$$



$$\angle K = 180^\circ - 36 - 51 = 93^\circ$$

$$\frac{\sin N}{n} = \frac{\sin M}{m}$$

$$\frac{27 \times \sin 51^\circ}{36} = \frac{\sin M}{27}$$

$$\sin M = 0.5828$$

$$M = 35.6^\circ$$

$$M = 36^\circ$$

$$\frac{n}{\sin N} = \frac{k}{\sin K}$$

$$\frac{36}{\sin 51^\circ} = \frac{k}{\sin 93^\circ}$$

$$k = 46.259$$

$$k = 46.3$$