Law of Sines

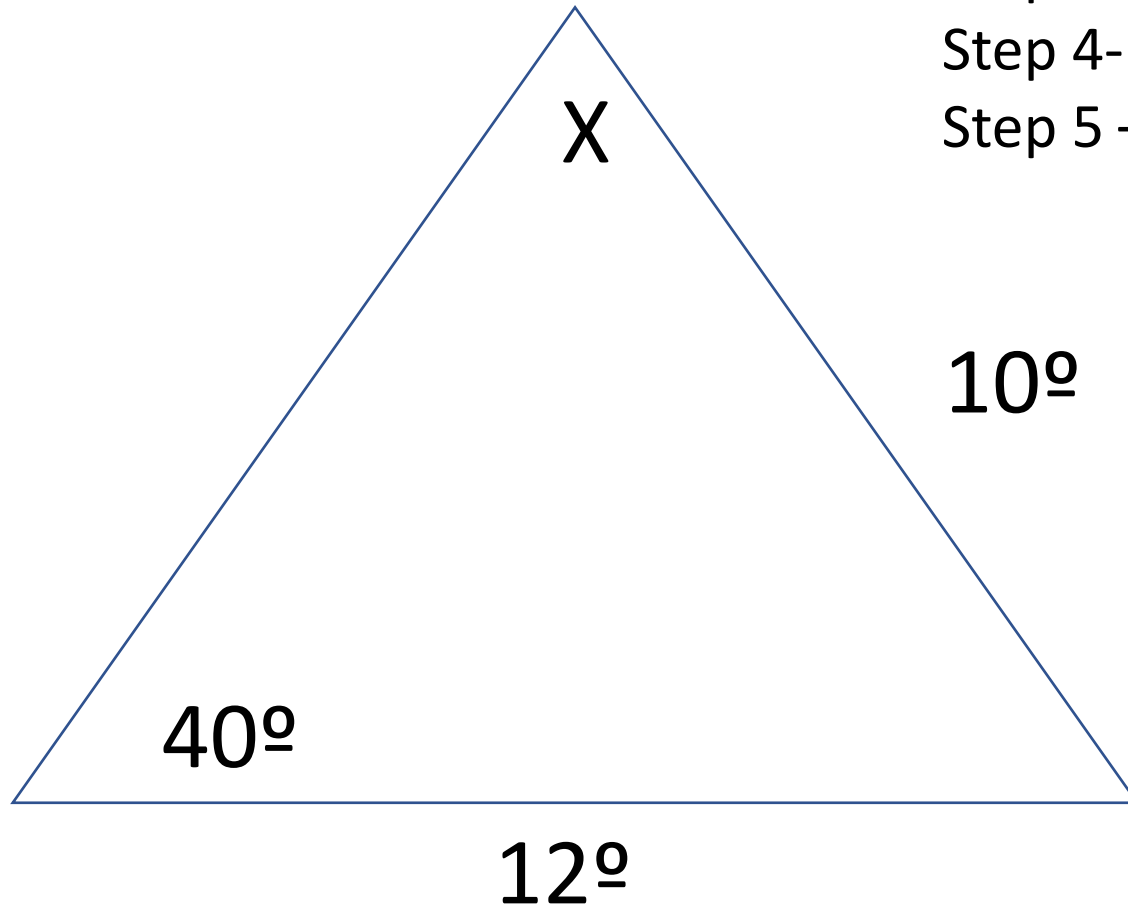$$\frac{\text{Sin A}}{a} = \frac{\text{Sin B}}{b} = \frac{\text{Sin C}}{c}$$

Law of Sines

Step 1 – Label sides and angles
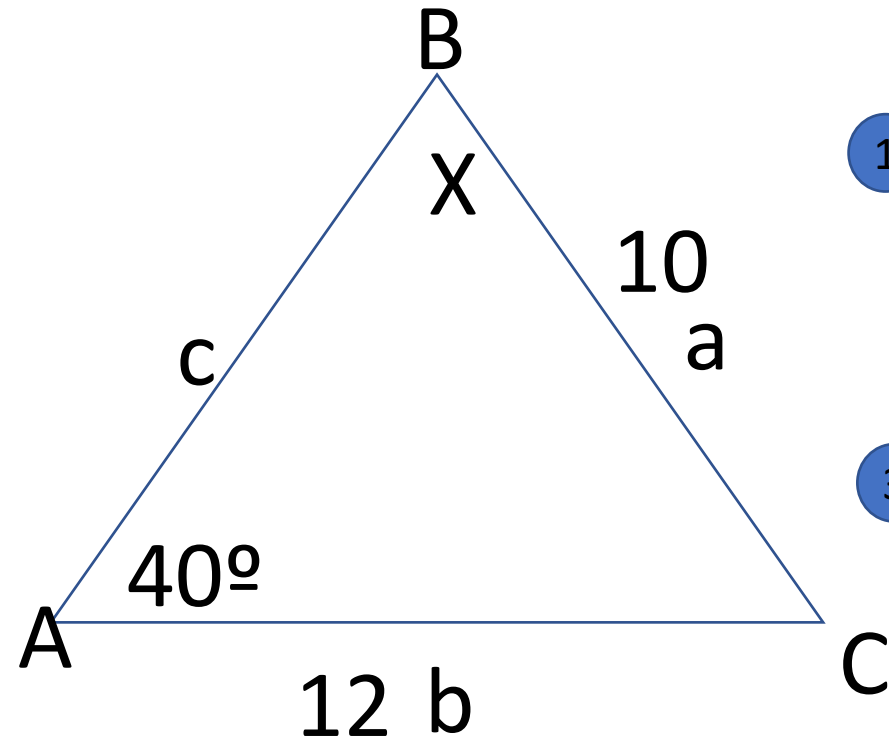Step 2- choose what part of the formula to use
Step 3- plug in the numbers you know
Step 4- cross multiply
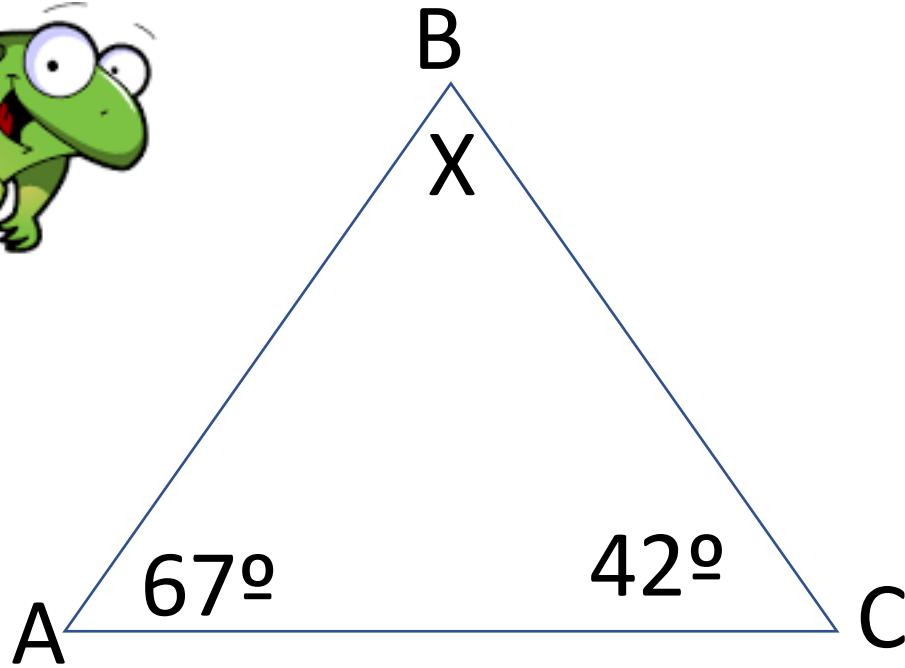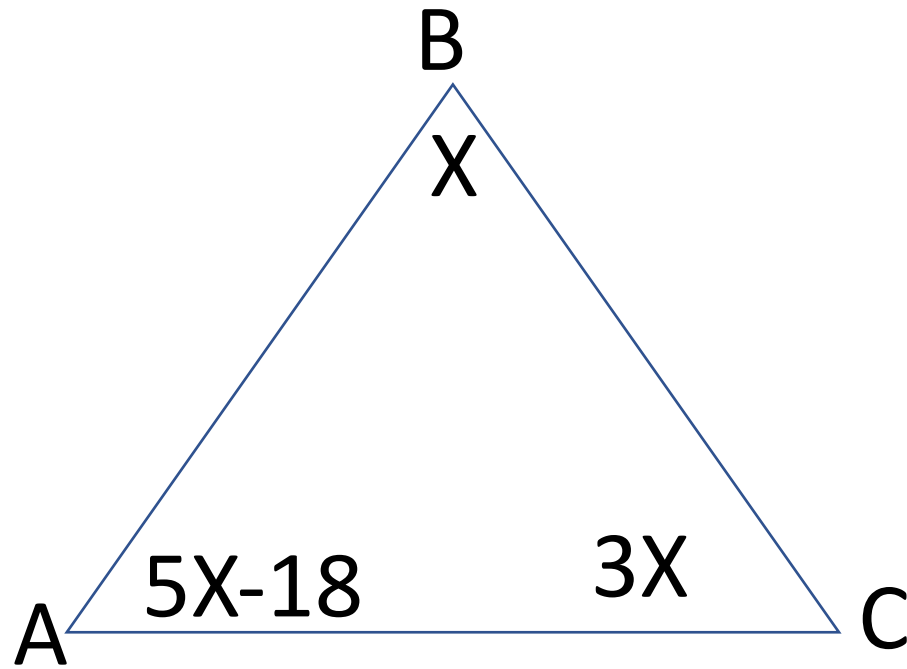Step 5 – to isolate X multiply by Sin^{-1}

X

10º

40º

12º

Law of Sines

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

B

X

10
a

c

40º

A

C

12 b

1 $\frac{\text{Sin 40}}{10} = \frac{\text{Sin X}}{12} = \frac{\text{Sin}}{c}$

2 12 Sin 40 = 10 Sin

3 $\frac{12 \text{ Sin 40}}{10} = \frac{10 \text{ Sin X}}{10}$

4 1.2 Sin 40 = Sin X

5 1.2 Sin 40 = Sin X

.77 = Sin X

6 .77 = Sin X

.77 Sin^{-1} = X

7 X = 50.47

Homework – Find the missing angle

B

X

67º   42º

A   C

Homework - Find the 3 missing angles

B

X

5X-18

3X

A

C

Homework – Find the missing angle

B

X

110

c

c

56º

A

120b