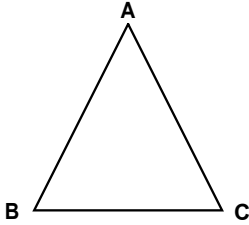


8.1 Sine Law day 2

Chapter 8: Trigonometry of Acute Triangles

8.1 - The Sine Law (Day 2)



The relationship between the sides and their opposite angles in any $\triangle ABC$ is:

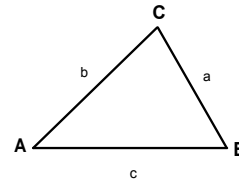
Sine Law

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

Sine Law: The ratio of each side to its opposite angle is equal!

Sine Law

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



Note: Even though there are three parts to this equation, you only use two parts at a time. The choice of which two to use depends on what information is given.

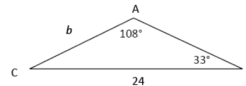
The Sine Law can be used in any triangle to find:

1. An unknown side when two angles and a side are known
2. An unknown angle if two sides and the angle opposite one of the known sides are known

1

Find the length of side 'b'

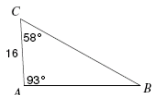
$$\frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$



8.1 Sine Law day 2

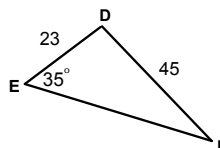
2 Find the length of side 'a'

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



3 Find Angle F

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



4

For triangle ABC: $\angle B = 45^\circ$, $a = 28$, $b = 27$
Sketch the triangle and then find angle C

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

Complete:

8.1 Sine Law Homework

and

8.1 Sine Law Homework #2