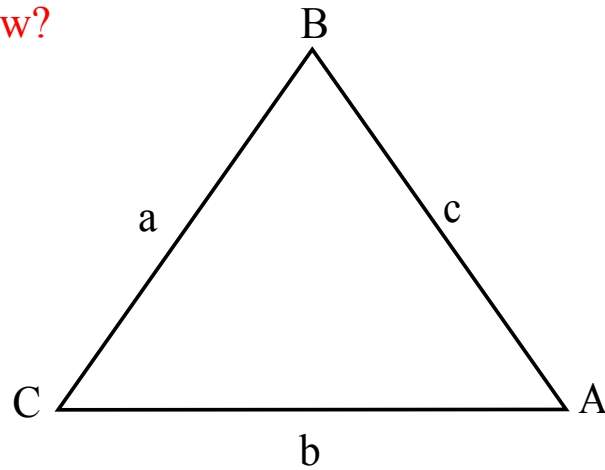
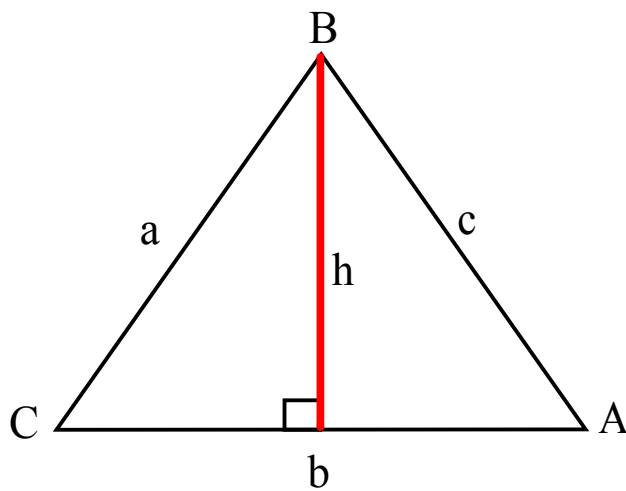


5.5 Law of Sines

If we want to find the area of a triangle, what do we need to know?



What is the height of the triangle??



$h =$

$h =$

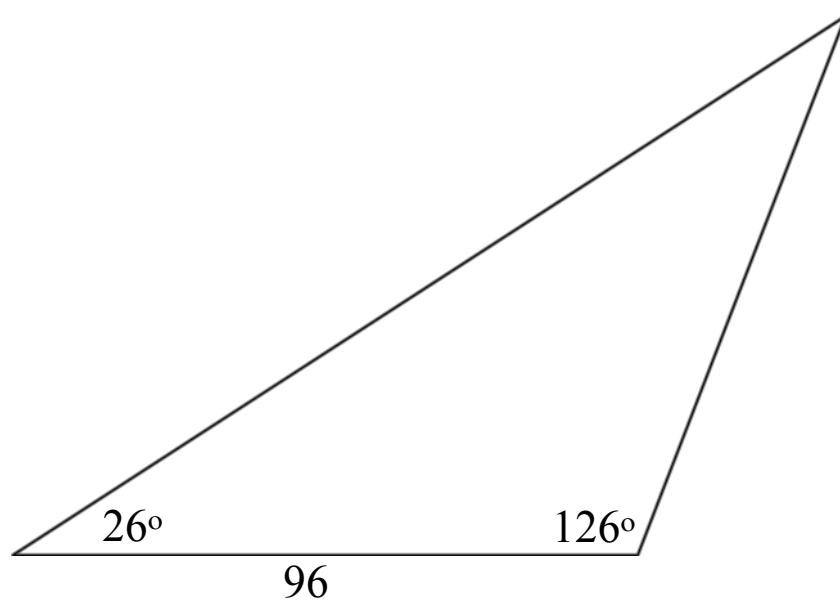
Law of Sines

47

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

Use when you know AAS or ASA.
or with Ambiguous Case: SSA

Solve the triangle:



Solve the triangle given:

$$A = 76.7^\circ$$

$$B = 29.3^\circ$$

$$c = 87$$

SSA

#48

(butt case)

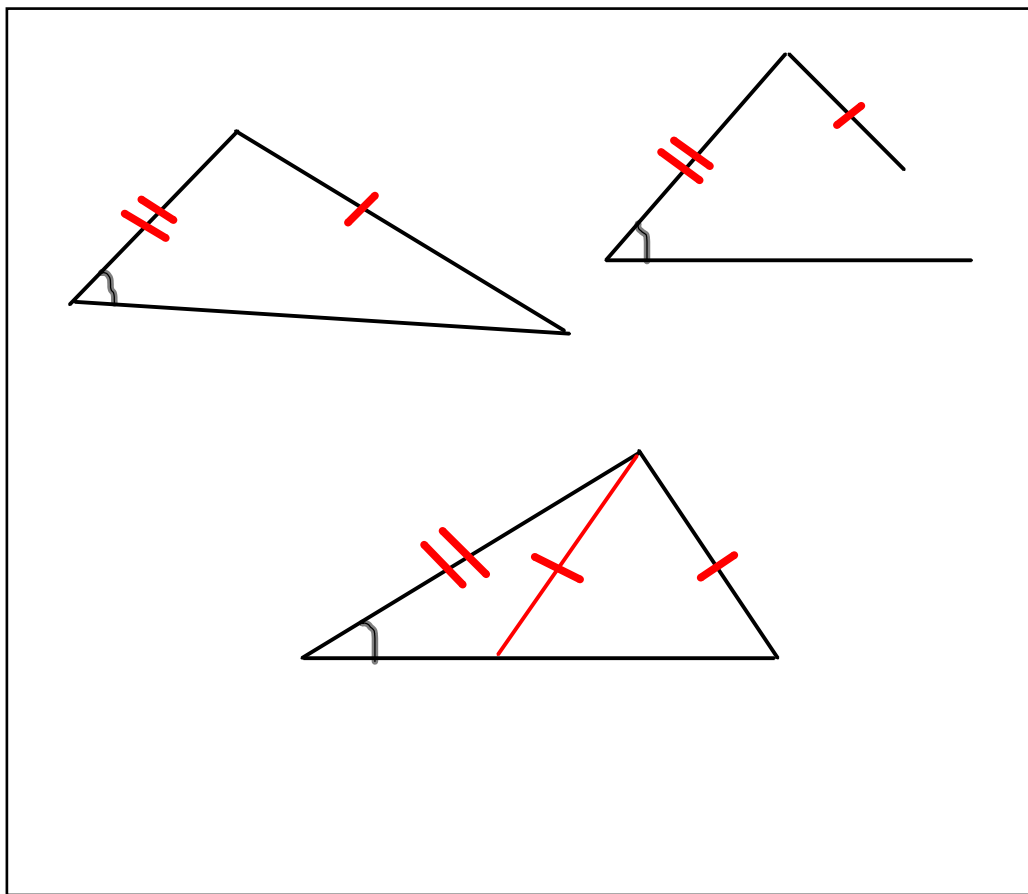
What do you remember from Geometry??

There are 3 possible situations:

0 triangles

1 triangle

2 triangles

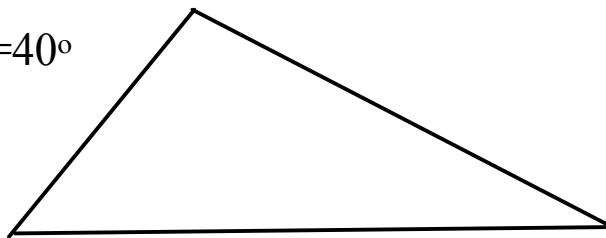


0 triangles:
given $a=20$, $b=5$, $B=42^\circ$

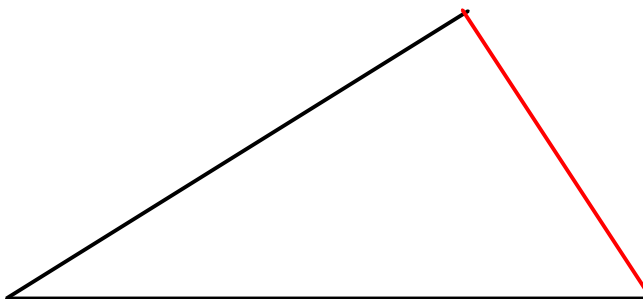
The block contains two diagrams of a triangle. The top diagram is a simple outline of a triangle. The bottom diagram is a more detailed representation of the same triangle, with the left side labeled '20', the right side labeled '5', and the bottom-left angle labeled '42°'.

1 triangle

given: $a=3$, $b=2$, $A=40^\circ$



given: $a=6$, $b=8$, $A=35^\circ$



given: $a=37$, $b=40$, $A=71^\circ$

Solving Word Problems

Step 1: Avoid panic and confusion at all times.

Step 2: Take a deep breathe

Step 3: Draw a picture

Step 4: Label what you have

Step 5: Decide how you can use what you have to find what you don't

Step 6: just do it