

Find all possible triangles that can be formed using the given measurements.

19)  $m\angle C = 63^\circ$ ,  $b = 9$ ,  $c = 12$

20)  $m\angle B = 33^\circ$ ,  $a = 27$ ,  $b = 22$

21)  $m\angle B = 29^\circ$ ,  $a = 14$ ,  $b = 19$

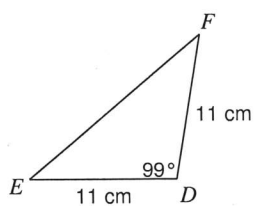
22)  $m\angle B = 95^\circ$ ,  $b = 24$ ,  $a = 5$

23)  $m\angle A = 29^\circ$ ,  $c = 18$ ,  $a = 17$

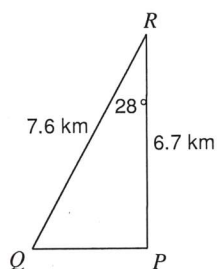
24)  $m\angle B = 35^\circ$ ,  $a = 24$ ,  $b = 6$

Find the area of each triangle to the nearest tenth.

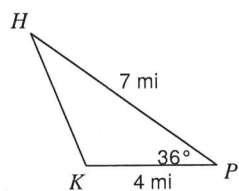
25)



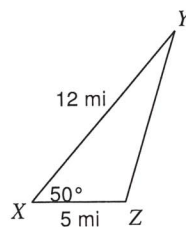
26)



27)



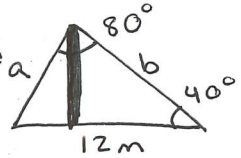
28)



## Law of Sines

## Word Problems

1. A post is supported by two wires (one on each side going in opposite directions) creating an angle of  $80^\circ$  between the wires. The ends of the wires are 12m apart on the ground with one wire forming an angle of  $40^\circ$  with the ground. Find the lengths of the wires.

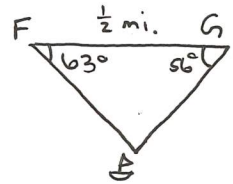


3. 3 friends are camping in the woods, Bert, Ernie and Elmo. They each have their own tent and the tents are set up in a Triangle. Bert and Ernie are 10m apart. The angle formed at Bert is  $30^\circ$ . The angle formed at Elmo is  $105^\circ$ . How far apart are Ernie and Elmo?

4. Two scuba divers are 20m apart below the surface of the water. They both spot a shark that is below them. The angle of depression from diver 1 to the shark is  $47^\circ$  and the angle of depression from diver 2 to the shark is  $40^\circ$ . How far are each of the divers from the shark?



6. Two observers are standing on shore  $\frac{1}{2}$  mile apart at points F and G and measure the angle to a sailboat at a point H at the same time. Angle F is  $63^\circ$  and angle G is  $56^\circ$ . Find the distance from each observer to the sailboat.



9. A 4m flag pole is not standing up straight. There is a wire attached to the top of the pole and anchored in the ground. The wire is 4.17m long. The wire makes a  $68^\circ$  angle with the ground. What angle does the flag pole make with the wire?

19. For the figure below find BC to the nearest whole number.  $CD=15$ .

