

## Lesson 13.5 Worksheet

Name: \_\_\_\_\_

State the case (AAS, ASA, or SSA) applicable to the given measurements. Draw a picture.

1.)  $A = 112^\circ$ ,  $a = 9$ ,  $b = 4$

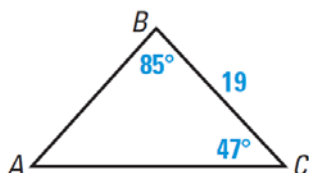
2.)  $A = 28^\circ$ ,  $B = 64^\circ$ ,  $c = 55$

3.)  $A = 52^\circ$ ,  $a = 32$ ,  $b = 42$

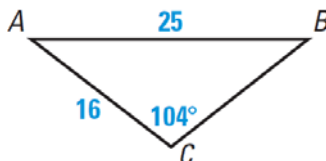
4.)  $A = 40^\circ$ ,  $C = 75^\circ$ ,  $c = 20$

Solve  $\triangle ABC$ . Round answers to the nearest tenth.

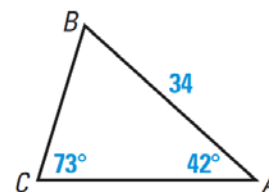
5.)



6.)



7.)



Solve  $\triangle ABC$ . Round answers to the nearest tenth. Some "triangles" may have no solution or two solutions.

8.)  $A = 26^\circ$ ,  $C = 35^\circ$ ,  $b = 13$

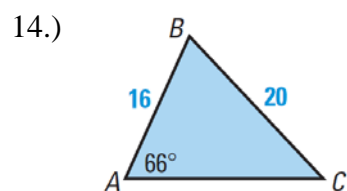
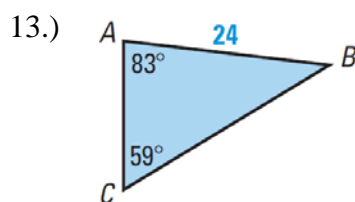
9.)  $C = 98^\circ$ ,  $c = 29$ ,  $a = 33$

10.)  $A = 114^\circ$ ,  $a = 15$ ,  $b = 10$

11.)  $A = 38^\circ$ ,  $a = 19$ ,  $b = 25$

Find the area of  $\triangle ABC$ . Round answers to the nearest tenth.

12.)  $C = 96^\circ$ ,  $a = 7$ ,  $b = 15$



**NO CALCULATOR, MAY USE UNIT CIRCLE**

Evaluate the function without using a calculator.

15.)  $\csc\left(-\frac{4\pi}{3}\right)$

16.)  $\cot\frac{13\pi}{4}$

17.)  $\sec\left(-\frac{5\pi}{6}\right)$

Evaluate the expression without a calculator. Give your answer in both radians and degrees.

18.)  $\sin^{-1}\left(-\frac{\sqrt{2}}{2}\right)$

19.)  $\tan^{-1}\frac{\sqrt{3}}{3}$

20.)  $\cos^{-1}-1$

21.)  $\sin^{-1} 0$

**USE CALCULATOR AND UNIT CIRCLE**

Solve the equation for  $\theta$ .

22.)  $\cos \theta = -0.22$ ;  $180^\circ < \theta < 270^\circ$

23.)  $\tan \theta = 1.6$ ;  $180^\circ < \theta < 270^\circ$