

**MATH 1080 TRIGONOMETRY**

7.2 Worksheet – Right Triangle Trig

Name \_\_\_\_\_

Date \_\_\_\_\_

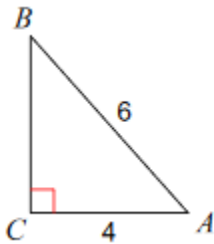
1. Use cofunctions to determine the missing value.

a.  $\tan(36^\circ) = \cot ( \quad )$

b.  $\sin\left(\frac{\pi}{2}\right) = \cos ( \quad )$

2. Given right  $\triangle ABC$ , if  $\tan A = \frac{3}{2}$  and  $b = 5$ , determine the **exact** lengths of sides  $a$  and  $c$ .

3. Given right  $\triangle ABC$ , determine the **exact** value of the six trigonometric functions.



$\sin A =$

$\csc A =$

$\cos A =$

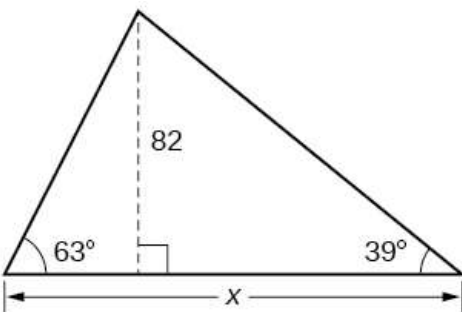
$\sec A =$

$\tan A =$

$\cot A =$

4. A ladder leans against a building so that the angle with the ground and the ladder is  $62^\circ$ . If the base of the ladder is about 10 feet from the base of the building, approximate the length of ladder to the nearest tenth of a foot.

5. Determine the length of  $x$  to the nearest tenth. (Open Stax #42)



6. There is an antenna on the top of a building. From a location 300 feet from the base of the building, the angle of elevation to the top of the building is measured to be  $40^\circ$ . From the same location, the angle of elevation to the top of the antenna is measured to be  $43^\circ$ . Find the height of the antenna to the nearest hundredth. (Open Stax #50)