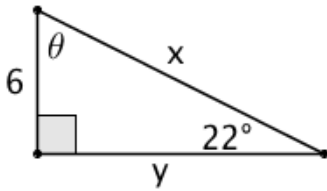


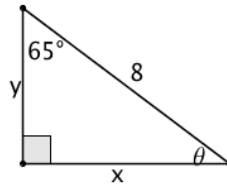
Solving Sides Using Trigonometry

Use what you know about Trigonometry to solve each triangle: (Solve for  $x$ ,  $y$ , &  $\theta$ )

1.



2.



Review Problems:

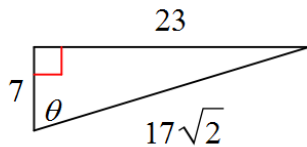
3. Given  $\tan \theta = \frac{3}{4}$  draw the triangle and find  $\cos \theta$

4. If  $\sin \theta = .74$  and  $\cos \theta = .43$ , what is  $\tan \theta$ ?

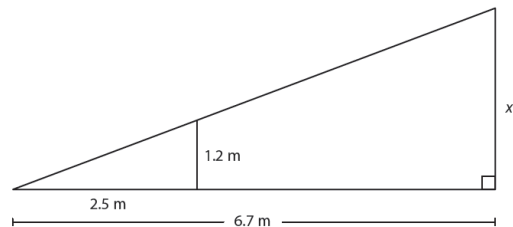
Draw a Picture:

5. Write the indicated trig ratio.

$\sec \theta$



6. Given that all triangles pictured below are similar, find the value of  $x$ .



**Extended Understanding:**

7. A ranger's tower is located 44 m from a tall tree. From the top of the tower, the angle of depression to the base of the tree is  $36^\circ$ . How tall is the tower?

Draw a Picture:

8. You are climbing Mount Cook in New Zealand. You are below the mountain's peak at an altitude of 8580 feet. Using surveying instruments, you measure the angle of elevation to the peak to be  $30.5^\circ$ . The distance between you and the peak is 7426 feet. What is the altitude of the peak?

Draw a Picture: