

Inverse Trig. Functions (Assignment 11)

Calculate each of the following. Round the long decimal answers to the nearest thousandth.

1.  $\sin^{-1}(0.9)$

2.  $\tan^{-1}(7.1)$

3.  $\cos^{-1}(0.5)$

Solve each equation for  $\theta$ .

4.  $\sin \theta = 0.44$

5.  $\cos \theta = 0.76$

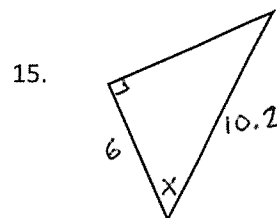
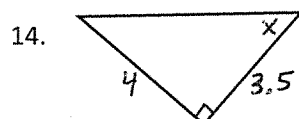
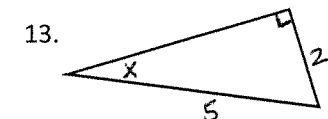
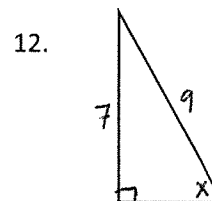
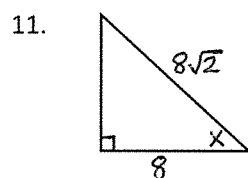
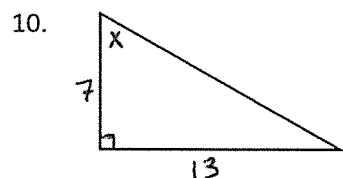
6.  $\tan \theta = 1$

7.  $\cos \theta = \frac{2}{25}$

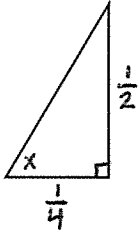
8.  $\tan \theta = \frac{7}{3}$

9.  $\sin \theta = \frac{19}{24}$

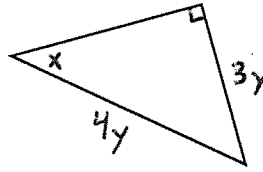
Find  $x$  in degrees for each triangle below by using inverse trigonometric functions.



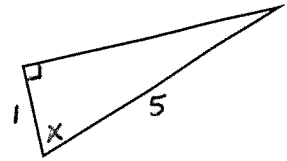
16.



17.



18.



19. A 51 foot-tall tree casts a shadow of 68 feet along the ground. What angle does the sunlight make with the ground? First draw a picture that represents this situation, then create an equation and solve.

20. A plane takes off with a velocity of 190 miles per hour and a groundspeed (the horizontal component of the velocity) of 174 miles per hour. What is the angle of take-off?