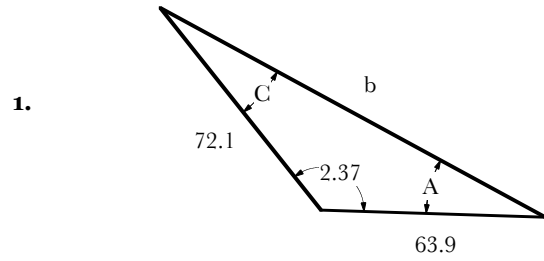


PreCalculus Honors

Test (9/1/06)

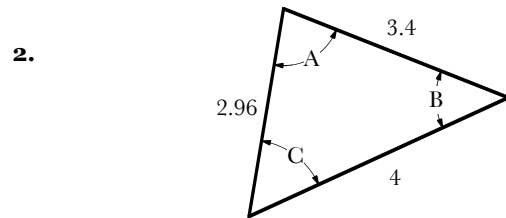
Your Name:

(1-4) Find the unknown quantities. Angles are in **radians**.



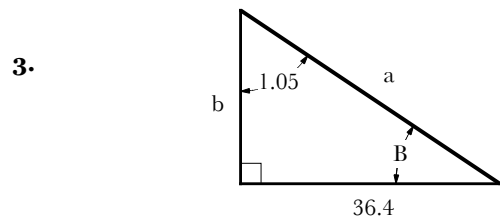
$b =$

$C =$



$A =$

$B =$



$a =$

$B =$

4. If $\sin \theta = 0.29$, what is $\cos \theta$?

5. If $\csc \theta = 2.87$, what is $\sin \theta$?

6. If $\sec \theta = 2$, what is $\cot \theta$?

7. A wheel of cheese 3.5 feet in diameter spins at a rate of 12.5 rpm. Find the angular speed of the cheese, in radians per second. How fast is the mouse sitting on the edge of the cheese moving in miles per hour?

angular speed (rads/sec)

mouse speed (mph)

8. Two telescopes are in the same solar orbit, 1.2 billion miles from the sun. One telescope follows behind the other at a distance of 2.48 radians.

At the same time, each makes an observation of Neptune. The angle between the sun, the first telescope, and Neptune is recorded as 0.70 radians. The other telescope records its own measurement of 2.73 radians (see below).

How far apart are the telescopes?

Extra Credit: What is the distance from Neptune to the sun?

