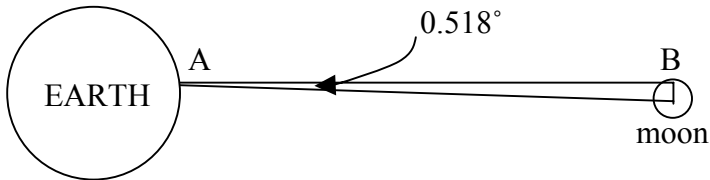


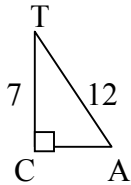
Math 188 CHAPTER 5 – 6

1. Find the $\sec \theta$ if $\sin \theta = -\frac{2}{5}$

2. As viewed from the earth, the angle subtended by the full moon is 0.518° . Use this information and the fact that the distance AB from the earth to the moon is 235,900 miles to find the radius of the moon.



3. Solve the triangle:



mCA _____

$\angle A$ _____

$\angle T$ _____

4. Given $y = 4 + 5^{\sin x}$.

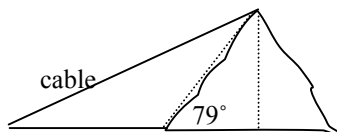
- a) Graph it using a graphing calculator.

- b) Is the graph periodic?

- c) If so what is its period?

- d) Is the graph odd, even, or neither?

5. A steep mountain is inclined with a 79° angle of elevation. The mountain is 8400 ft tall. A cable car is to be installed from a point 2800 ft from the base of the mountain to the top of the mountain. Find the length of the cable.



6. Graph: $y = 3 \cos(120x - 120)$
(Label axes and do NOT use a graphing calculator.)

7. Given $y = 3 + 2 \csc 2(x + 1)$, find the following with out a graphing calculator.

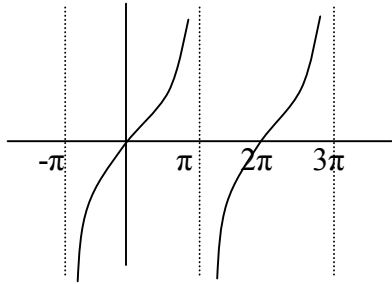
a) Graph.

b) amplitude

c) period

d) phase shift

8. For the graph below find its period, phase shift, and equation.



9. Find the period and graph of $y = \cot(\pi x + \frac{1}{2}\pi)$
(Do not use a graphing calculator.)

period: _____

10. Find the exact value of $\sec\left(\frac{10\pi}{3}\right)$.

(Show the work and do not use a calculator.)

Extra Credit: Prove the Law of Sines.