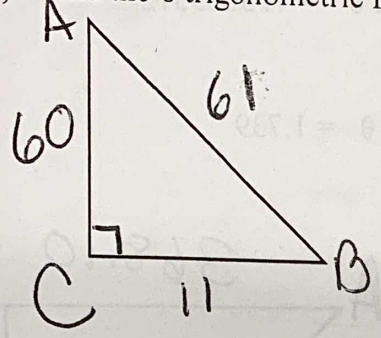
Chapter 2 Review

1) Find the 6 trigonometric functions in terms of Angle B



2. Write each as a cofunction

a) sec 14°

b) tan 62°

c) csc° 80 52'

3. Solve for each angle

a) $\sin 4X = \cos 14x$

b) $\sin (3X - 20) = \cos 5X$

4. Evaluate using a calculator. Do not round.

a) sin 21° 31'

b) cos 1.0061°

c) sec 66° 54'

d) $\cos^2 55° + \sin^2 55°$

e) $\frac{1}{\sin 27.8°}$

f) $\frac{\cos 15.4°}{\sin 17.9°}$

5. Find the six 6 trigonometric functions for each angle. Exact values using special right triangles. No decimals, rationalize.

a) 60°

b) 135°

c) 150°

d) 240°

6. Find each angle measure.

a) $\sin\theta = .95319067$

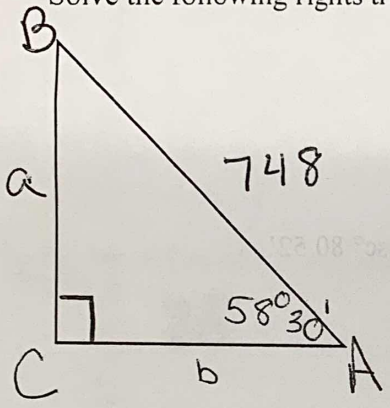
b) $\sec\theta = 7.3683512$

b) $\csc\theta = 9.5670466$

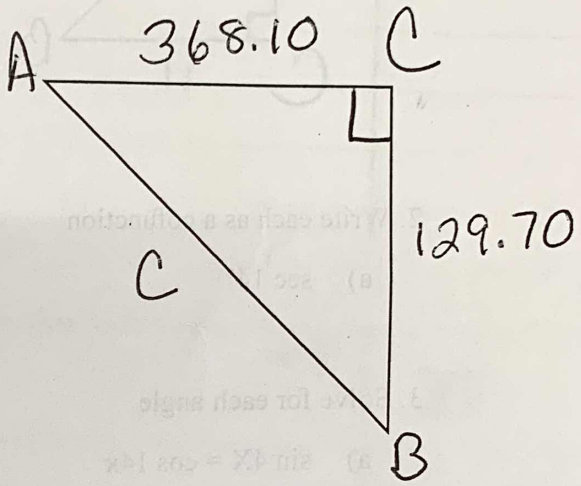
d) $\tan\theta = 1.739$

Solve the following rights triangles for all unknowns.

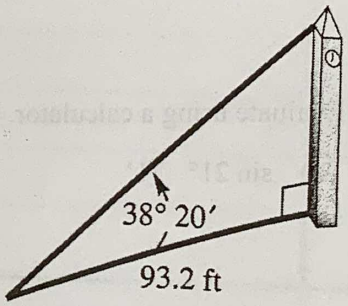
7.



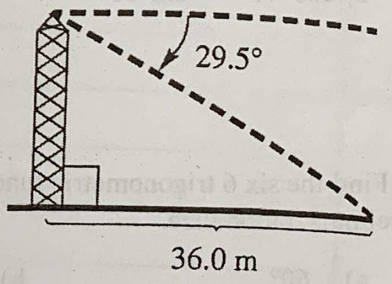
8.



51. ***Height of a Tower*** The angle of elevation from a point 93.2 ft from the base of a tower to the top of the tower is 38° 20′. Find the height of the tower.



52. ***Height of a Tower*** The angle of depression of a television tower to a point on the ground 36.0 m from the bottom of the tower is 29.5°. Find the height of the tower.



9. What is the grade resistance of a 2400-lb car traveling on a $-2.4°$ downhill grade?

10. What is the grade resistance of a 2100-lb car traveling on a $1.8°$ uphill grade?

11. A car traveling on a $-3°$ downhill grade has a grade resistance of -145 lb. What is the weight of the car?