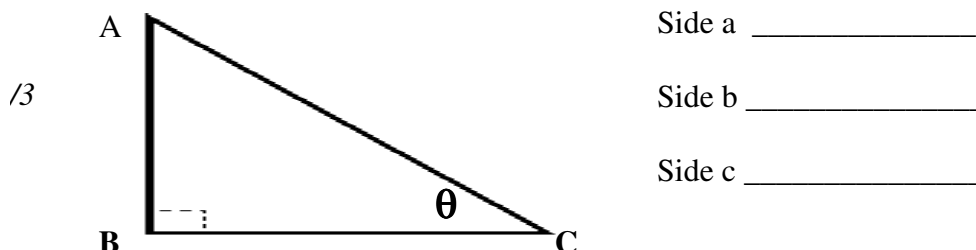Name: _____

Date:_____

Grade 10 Essential Unit E - Trigonometry

1.   In △ABC identify each side of the right-angled triangle relative to angle **θ**. As Opposite, Adjacent, or Hypotenuse

/3

Side a _____

Side b _____

Side c _____

/3

b.   Using △ABC above, state the **3 trigonometric main ratios** in terms of **a, b,** and **c**

Sin **θ** = _____   Cos **θ** = _____   Tan **θ** = _____

2.   **Calculate each of the following (Round to 3 decimal points)**

a.   sin 30°=   b. cos 60°=   c. tan 55° =

/6

d. 7*(cos 19°) =   e. 5+(sin 58°)=   f. $\dfrac{3\times(\tan 42°)}{8}=$
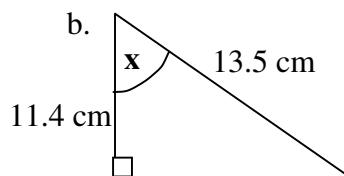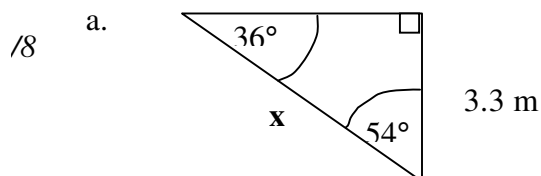
3.   **Find the measure of each angle to the nearest <u>whole</u> degree. Draw it to approximate.**

a. **tan (A) = 0.715**   b. **cos (D) = 0.103**

/4

c. **sin (B) = 0.500**   d. **tan (C) = 0.561**

4.   **Find the value of x in each of the following triangles (Round all answers to 2 decimal places) SHOW ALL YOUR STEPS.**

/8

a.

3.3 m

b.

11.4 cm

13.5 cm

5. Karl is flying a kite. The string is 60 meters long. The kite is 30 meters above the ground. What angle of angle of elevation does the kite string make with the ground?

/4

6. You know the distance to a tall building is 3600 feet. You measure the angle of elevation as being 5.5°. How tall is the building above you?

/4

7. You are looking down from a cliff at a boat in the distance. The angle of depression is 2.5° to the boat. You know the cliff is 124 feet high. How far away is the boat in feet? In miles?

/4