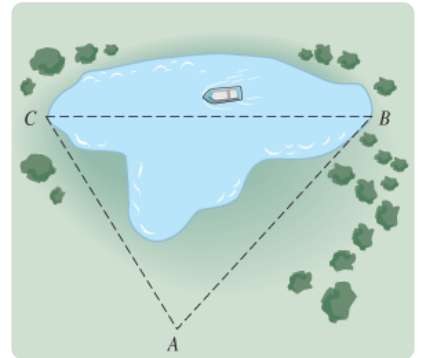


## Quiz 9 (20 pts.)

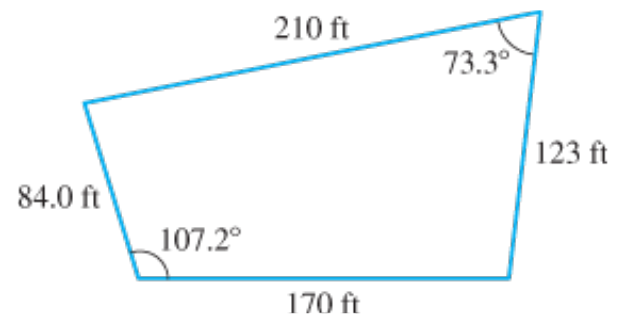
Name: \_\_\_\_\_

### Short Answer

- 1.) (3 pts) To estimate the length  $CB$  of the lake in the figure, a surveyor measures  $AB$  and  $AC$  to be 89 m and 74 m respectively and  $\angle CAB$  to be  $95^\circ$ . Find the approximate length of the lake to the nearest meter.



- 2.) (4 pts.) The figure below represents a four-sided plot of land in a new development that sells for \$5.20 per square foot. Find the price of this plot to the nearest thousand dollars.  
(Hint: Draw a diagonal that divides the plot into two triangles.)



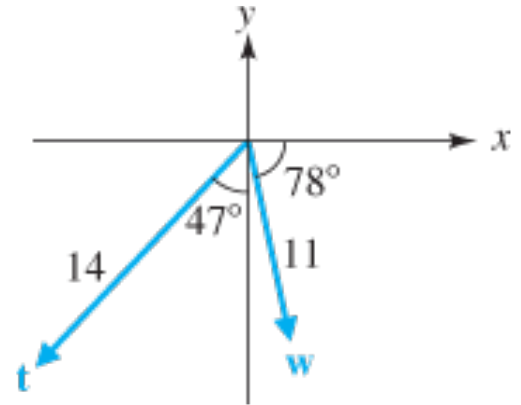
3.) (3 pts.) Find the area of triangle with sides  $a = 4.0$  in,  $b = 6.0$  in, and  $c = 8.0$  in to the nearest decimal place.

4.) (3 pts.) Let  $A = (-9, -1)$  and  $B = (5, -17)$ .

(a) Represent the geometric vector  $\overrightarrow{AB}$  as a standard vector.

(b) Find the magnitude of  $\mathbf{v} = \langle a, b \rangle$

- 5.) (3 pts.) Given the diagram below, find the scalar components  $a$  and  $b$  of vector  $\mathbf{w} = \langle a, b \rangle$ .



- 6.) (4 pts.) A plot of land was surveyed, with the resulting information shown in the figure. Find the length of  $BC$ .

