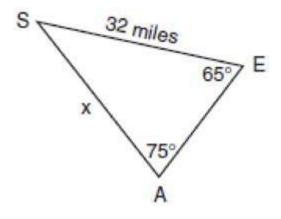
1) In triangle KRA, angle $K = 60^{\circ}$, side r = 12, and side a = 7. Find side k.

2) In triangle ABC, a = 5 cm, b = 6 cm, and c = 7 cm. Use your trig table to find angle C to the nearest degree.

3) In triangle CAT, angle $C = 60^{\circ}$, angle $A = 75^{\circ}$, and side t = 5 mm. Find side c.

4) The accompanying diagram shows the approximate linear distances traveled by a sailboat during a race. The sailboat started at point S, traveled to points E and A, respectively, and ended at point S. Find x, the distance from point A to point S. (Leave the answer in exact form...no need to find trig ratios.)



5) A surveyor is mapping a triangular plot of land. He measures two of the sides and the angle formed by these π

two sides and finds that the lengths are 400 yards and 200 yards and the included angle is $\frac{3}{3}$

a) What is the measure of the third side of the plot of land?

b) What is the area of this plot of land?