

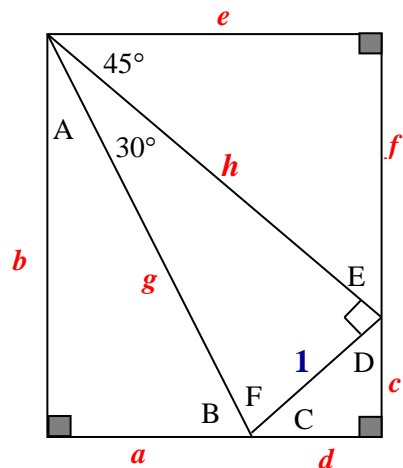
Professor: Fred Khoury

Directions: Show your work whenever possible: a correct answer is worth 0 point without any supporting work.

1. Given the rectangle to the right (all your answers in Radical Form - *no decimal*)

- Find the measures of A , B , C , D , E , and F angles
- Find the sides a thru h .
- Fill up the table

θ	$\sin \theta$	$\cos \theta$	$\tan \theta$
15°			
75°			



2. An oil tanker strikes a sand bar that rips a hole in the hull of the ship. Oil begins leaking out of the tanks with the spilled oil performing a circle around the tanker. The radius of the circle increasing at rate of 2.2 ft/hr.

- Write the area of the circle as a function of the time (t).
- Write the radius of the circle as a function of time.
- What is the radius of the circle after 3 hours.
- Determine the area of the circle after 3 hours.
- Compute the rate of change of the circle from 3 hours to 4 hours.
- If the oil tanker is 200 yards from shore, when will the oil spill first reach the shore line
(1 yd = 3 feet)

3. Apply the appropriate angle in radian (*no decimal - use fraction*) and degree (*no decimal - use minute*)

