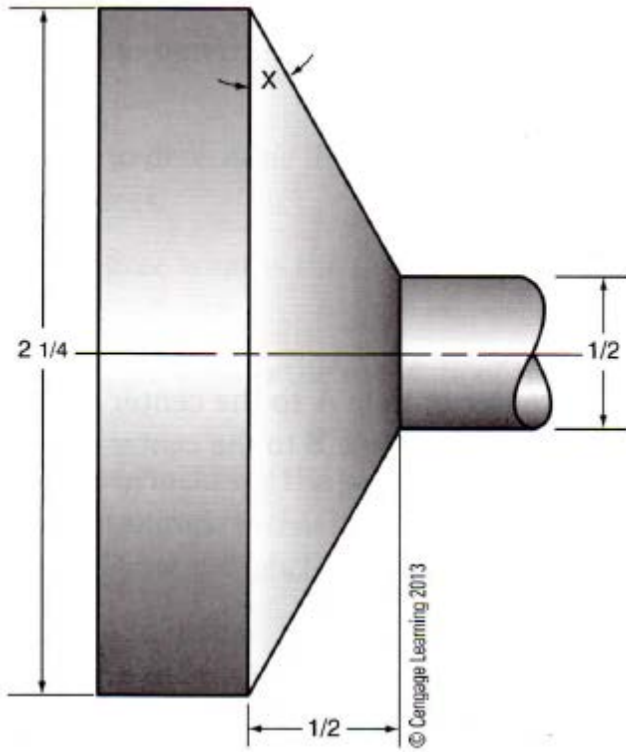


Name: \_\_\_\_\_  
Mathematics Period 3

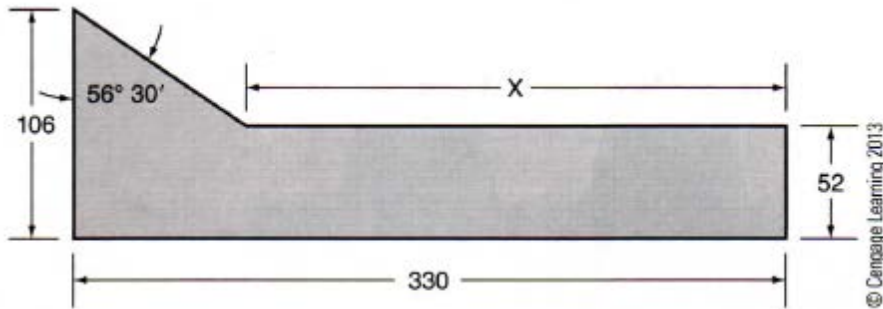
Date: 5/19/15  
Ms. Wilson

**Applying Trigonometric Ratios to CAD Problems**  
**Classwork**

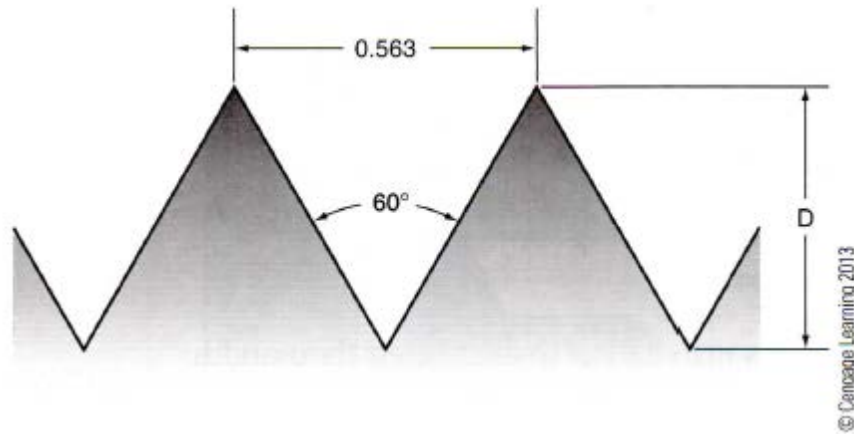
1.) Determine the measure of angle X needed to machine this shaft as illustrated. Express the answer to the nearest hundredth of a degree.



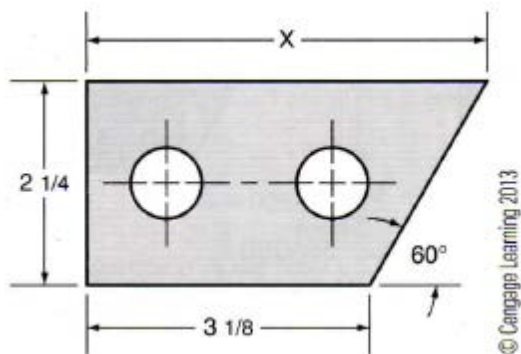
2.) Calculate the length of dimension X on this template to the nearest hundredth.



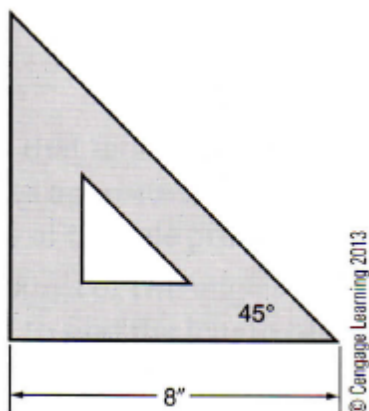
3.) The drawing below is an American National thread form. Calculate the depth  $D$  of the thread to the nearest thousandth.



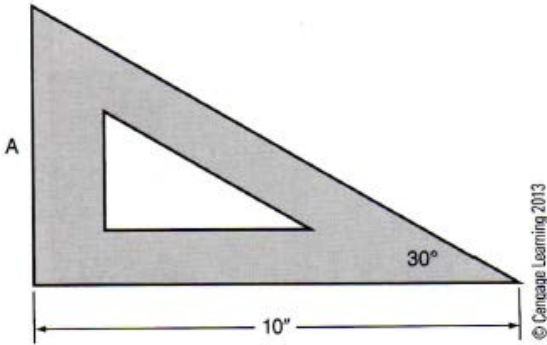
4.) Calculate distance  $X$  on the gauge shown below to the nearest thousandth.



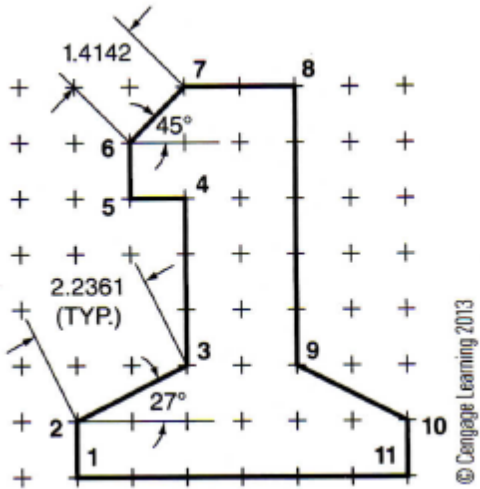
5.) A drafting student is using an 8-inch  $45^\circ$ - $45^\circ$ - $90^\circ$  triangle to construct a drawing. She would like to know the approximate length of the hypotenuse. Determine the length of the hypotenuse in inches, expressing the answer to two decimal places.



6.) A drafting student measures one leg of a 30°-60°-90° triangle and finds it to be 10 inches. Determine the length, in inches, of the shorter leg and the hypotenuse. Express the answers to two decimal places.



7.) Determine the grid spacing for the CAD drawings below rounded to the nearest whole number.



8.) Use the CAD drawing of the locating block below and calculate the length of line A to the nearest thousandth. Then, calculate the measure of angle B to the nearest whole degree.

