

MATH 131
LECTURE _____
MIDTERM 1

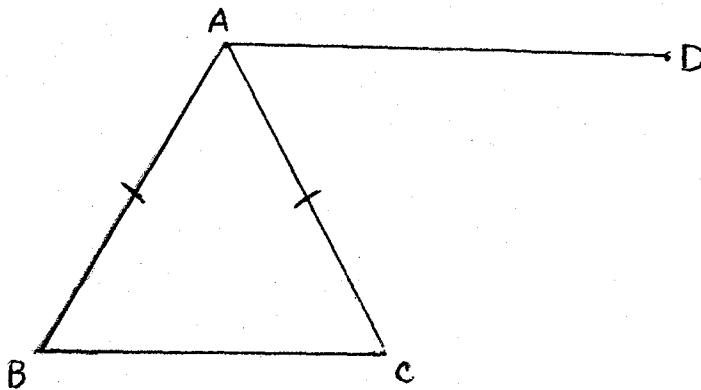
NAME: _____

For each problem make your steps clear and box your final answer.

Problem	Points Earned
1	
2	
3	
4	
5	
6	
7	
Total	

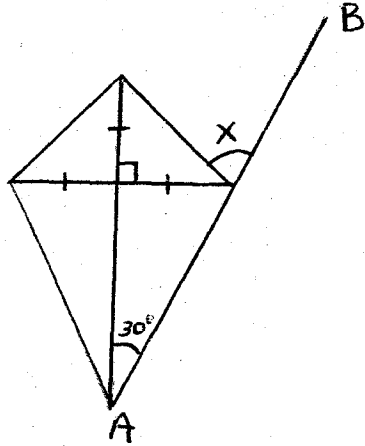
1. Give the definition of a regular polygon. Give an example in a picture.

2. In the figure below, $\triangle ABC$ is isosceles and $\overline{AD} \parallel \overline{BC}$. Prove that $\angle ABC = \angle CAD$.

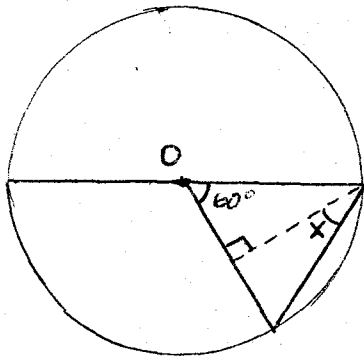


3. For this problem, provide a Teacher's Solution.

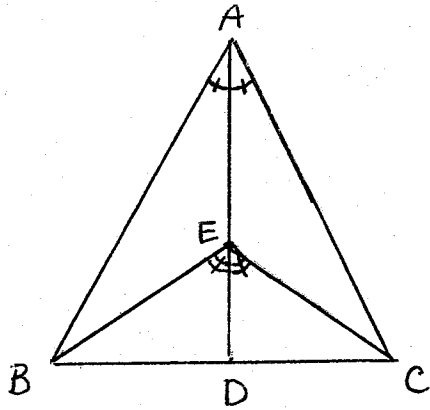
In the figure below, \overline{AB} is a straight line. Find x .



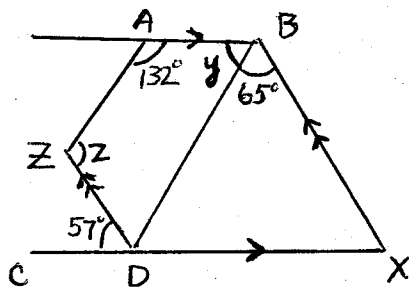
4. In the figure below, O is the center of the circle. Find x .



5. In the figure below, show that $\triangle ABE$ is congruent to $\triangle ACE$. What other pairs of triangles in the figure are congruent? (State why.)

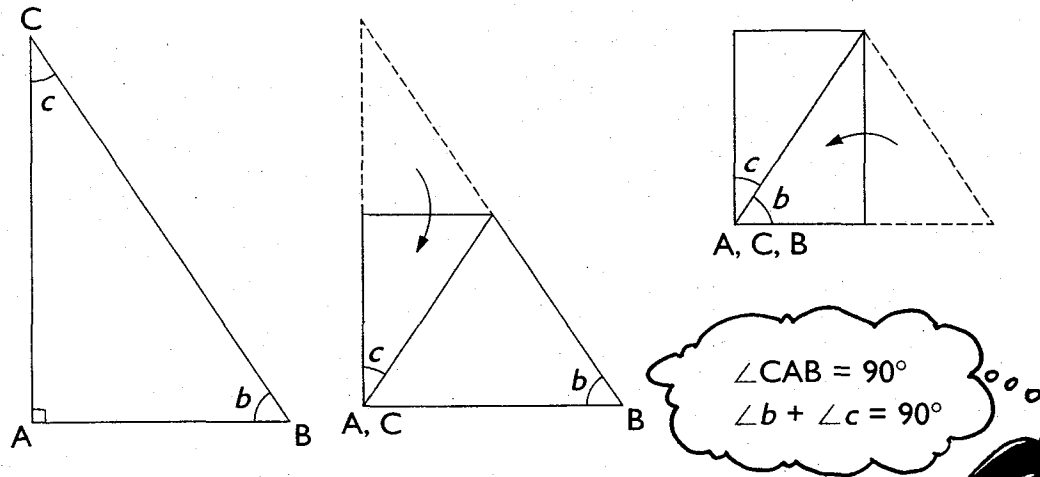


6. In the figure below, $\overline{AB} \parallel \overline{CX}$, $\overline{ZD} \parallel \overline{BX}$, $\angle ZAB = 132^\circ$, $\angle DBX = 63^\circ$, and $\angle CDZ = 57^\circ$. Find y and z .



7. The exercise below was taken from the Primary Mathematics 5B Textbook.

4. Fold a right-angled triangle like this:



What do you notice?

(a) What fact does the exercise demonstrate to the student?

(b) What other, more general fact could be used to derive this?