Lesson 5.1 • Polygon Sum Conjecture
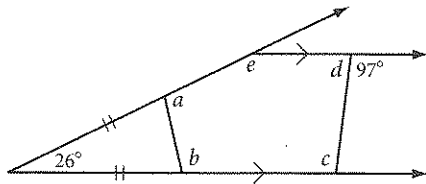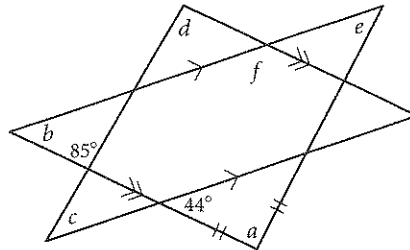
Name _____ Period _____ Date _____

In Exercises 1 and 2, find each lettered angle measure.

1. $a =$ _____, $b =$ _____, $c =$ _____,

$d =$ _____, $e =$ _____

2. $a =$ _____, $b =$ _____, $c =$ _____,
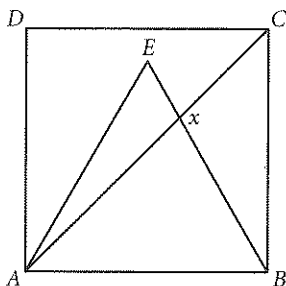
$d =$ _____, $e =$ _____, $f =$ _____

3. One exterior angle of a regular polygon measures 10°. What is the measure of each interior angle? How many sides does the polygon have?

4. The sum of the measures of the interior angles of a regular polygon is 2340°. How many sides does the polygon have?
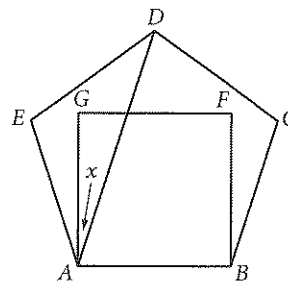
5. ABCD is a square. ABE is an equilateral triangle.

$x =$ _____

6. ABCDE is a regular pentagon. ABFG is a square.

$x =$ _____

7. Use a protractor to draw pentagon ABCDE with $m\angle A = 85°$, $m\angle B = 125°$, $m\angle C = 110°$, and $m\angle D = 70°$. What is $m\angle E$? Measure it, and check your work by calculating.