

Geometry
3.4, 3.5

HW # _____

Name _____

Date _____ Per _____ Col _____

**Calculators OK, but you must show set-ups for all problems.
Assume all polygons referred to are convex.

1. Find the sum of the interior angles of a:

a) 14-gon

b) 32-gon

2. Find the measure of one interior angle of a:

a) regular nonagon (9 sides)

b) regular 16-gon

3. Find the measure of each exterior angle of a:

a) regular 40-gon

b) regular 25-gon

4. An exterior angle of a regular polygon measures 15° .

a) How many sides?

b) What is the interior angle sum?

5. An interior angle of a regular polygon measures 150° .

a) What is the measure of an exterior angle?

b) How many sides?

6. An interior angle of a regular polygon measures 144° .

a) How many sides?

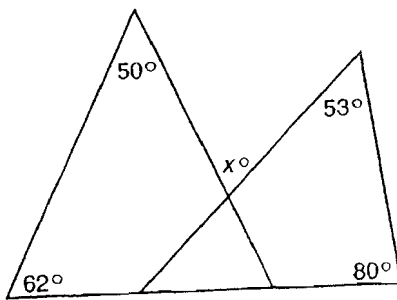
b) What is the interior angle sum?

7. In quadrilateral ABCD, $m\angle A = x$, $m\angle B = 2x$, $m\angle C = 3x$, and $m\angle D = 4x$. Find x and the measures of all four angles. Which sides must be parallel?

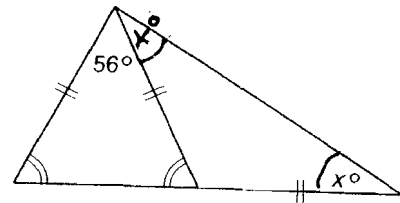
8. The angles of pentagon TRACE are as follows: $m\angle T = 120^\circ$, $m\angle R = 2y - 5$, $m\angle A = 2y$, $m\angle C = 2y$, and $m\angle E = 3y - 25$. Find all angle measures.

9-12: Find the value of x in each figure.

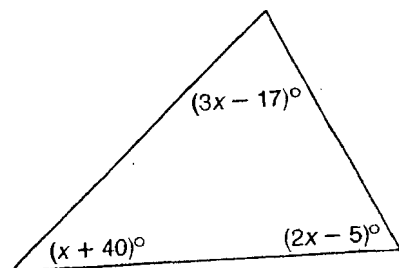
9.



10.



11.



12.

