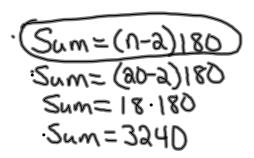
11.1 Interior Angles of a Polygon			
Figure	# of Sides	# of ∆	Sum of the Int. Angles
\triangle	3	1	1(180) = 180
	4	2	2(180) = 360
	5	3	3(180) = 540
	6	4	4(180) = 720
heptagon	7	5	5(180) = 900
n-gon	n	n - 2	(n-2)180 = sum
Mar 20-8:28 AM			

Ex 1
Find the sum of the interior angles of a convex 20-gon



Ex 2

The measures of 4 angles in a pentagon are: 90, 108, 108, and 114. Find the 5th angle.

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Ex3

In a convex hexagon, the 6 angle measures are:

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Ex 4

The sum of the interior angles of a polygon is 2520. What is the total number of sides?

$$Sum=(n-2)|80$$

$$2520=(n-2)|80$$

$$180$$

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15/6

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To find the measure of each angle of a regular polygon

Angle measure =
$$\frac{\text{Sum}}{\text{# of angles}} = \frac{(n-a)180}{n}$$

Ex 5
Find each angle measure of the given regular polygon

a) decagon
$$\angle = \frac{Sum}{\# 45} = \frac{(10-2)180}{10} = \frac{8.180}{10} = \frac{1440}{10} = 144$$

b) 30-gon =
$$\frac{(n-2)180}{10}$$
 $\frac{(30-2)180}{30}$ $\frac{28\cdot180}{30}$ $\frac{5040}{30}$ = 168.

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$$\angle = \frac{5mm}{\#2}$$

$$135 = \frac{(n-2)180}{N}$$

$$135 = \frac{18n-360}{A}$$

$$135n = 180n - 360$$

$$-180n - 180n$$

$$-45n = -360$$

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Oct 16-8:16 AM

Ex 7.

The measure of each interior angle of a regular polygon is 150. Name the polygon.

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Short cut for finding the number of sides in a regular polygon given the angle measure.

sides =
$$\frac{360}{(180 - \angle)}$$

Ex8

Each interior angle of a regular polygon is 108 Name the polygon

Oct 16-7:37 AM