Chapter 2 Review: Geometry

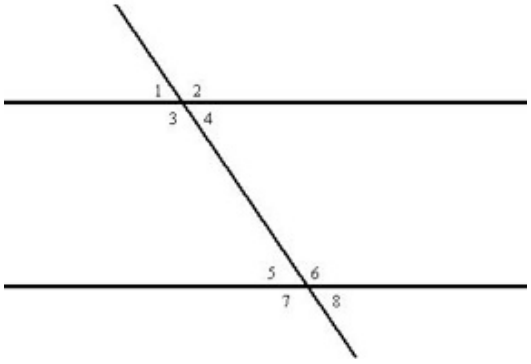
Textbook p70-106
Summary: p.84-85,105
Practice Questions p.106

Key Concepts:

Basic Rules

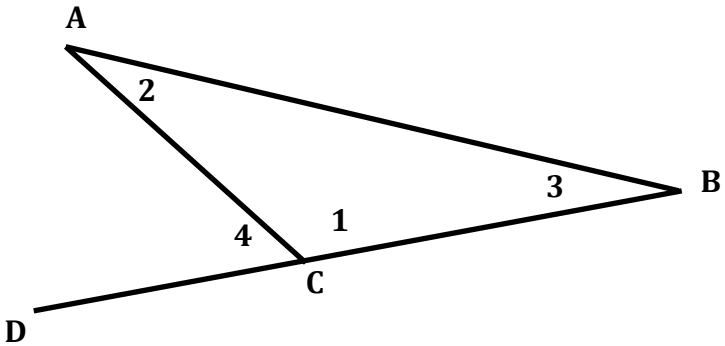
1) Angles on a line are _____ (add to 180°)
2) Angles within a right angle are _____ (add to 90°)
3) Angles at a _____ add to 360°
4) _____ _____ angles are equal
5) All _____ within a circle are equal
6) In an _____ _____, equal angles are opposite equal sides

Parallel Lines



1) _____ Angles are Equal (1=5, 2=6, 3=7, 4=8)
2) _____ _____ Angles are Equal (4=5, 3=6)
3) ___ _____ Angles are Supplementary (3+5=180, 4+6=180)

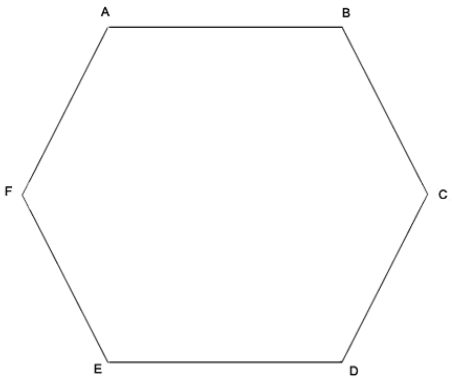
Angles in a Triangle



1) Angles in a Triangle Add to 180 Degrees
2) The External Angle in a Triangle Equals the Sum of the Opposite Interior Angles

Angles in a Polygon

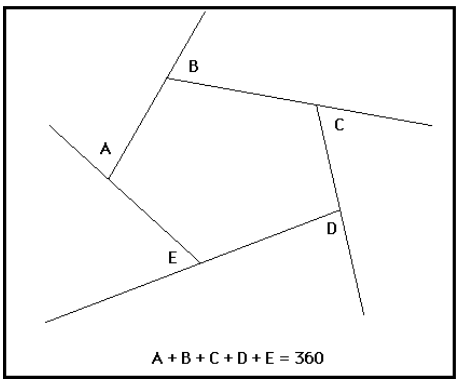
1) The sum of the measures of the _____ _____ of a convex polygon with n sides can be expressed as $180°(n\text{-}2)$.



Example: If a shape has 6 sides, then the sum of the interior angles is

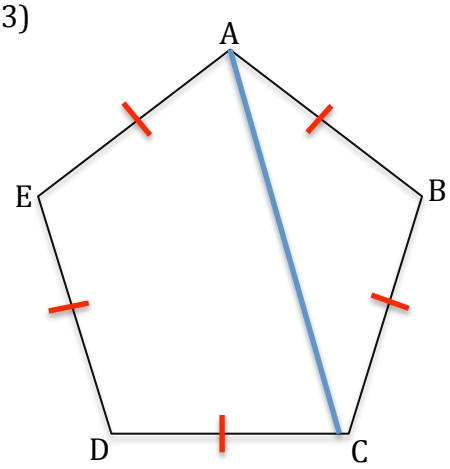
That means that if all the angles are equal (it is a _____ **polygon** and each angle is

2) The sum of the measures of the _____ _____ of any convex polygon is 360°.



Key Example: Given that ABCDE is a regular pentagon, prove that $AC \parallel ED$

3)

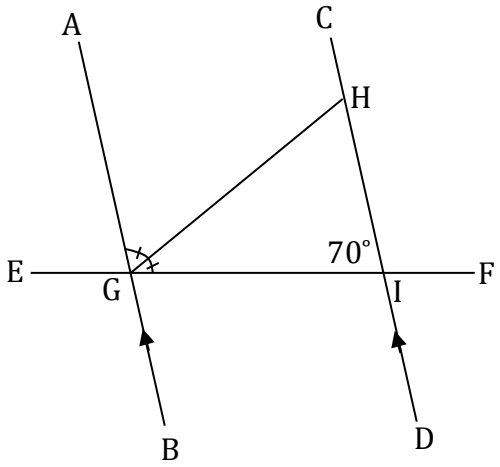


Statement	Reason
$\angle ABC = \angle DCB = \_\_\_\_$	
$\angle ACB = \angle CAB = \_\_\_\_$	
$\angle ACD = \_\_\_\_$	
$\angle EDC = \_\_\_\_$	
$\angle ACD + \angle EDC = \_\_\_\_$	

Note: It is important not to assume that the lines are parallel or use it as a reason early in the proof. That would be called _____ _____ (and be logically incorrect).

Chapter 2 Review: Geometry

Practice #1: Find each angle and give a reason.



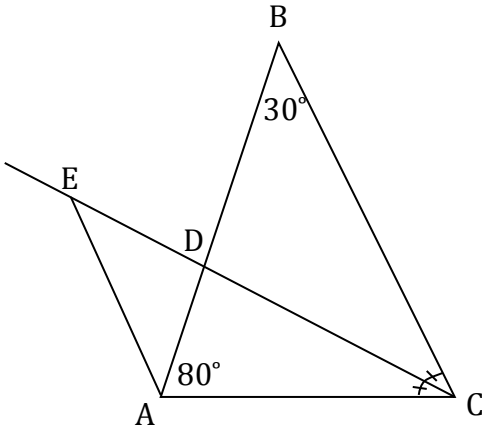
∠DIF= ____ _____

∠DIG = ____ _____

∠BGI = ____ _____

∠HGI = ____ _____

Practice #2: Find each angle and give a reason.



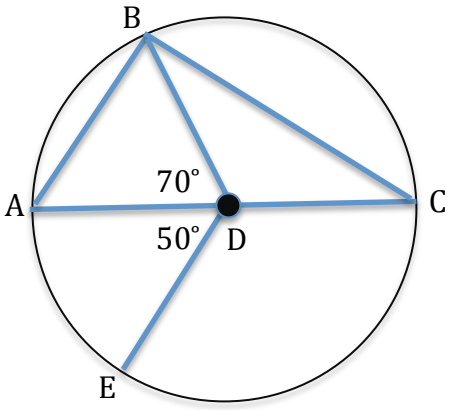
$\angle DCA$ = ____ _____

∠ADC = ____ _____

$\angle EDA$ = ____ _____

$\angle EDH$ = ____ _____

Practice #3: Find each angle and give a reason



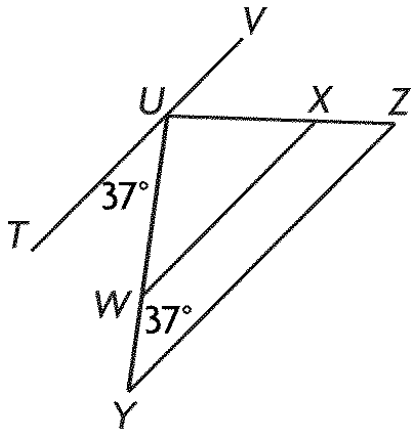
$\angle ABD$ = ____ _____

$\angle BDC$ = ____ _____

$\angle BCD$ = ____ _____

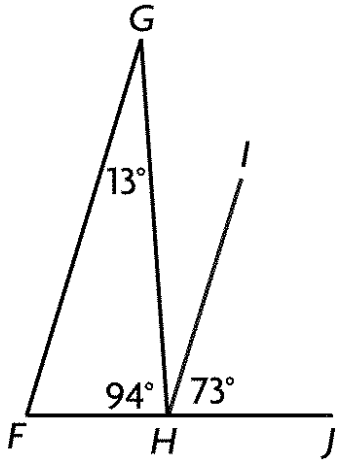
$\angle EDC$ = ____ _____

Practice #4: Given $\angle UWX = \angle WYZ$, prove: $TV \parallel WX$



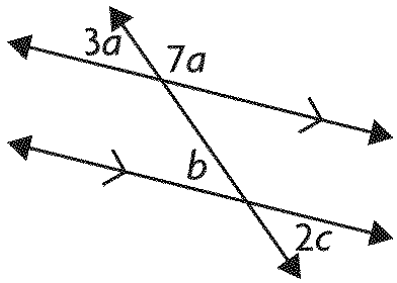
Statement	Reason

Practice #5: Prove: $FG \parallel HI$

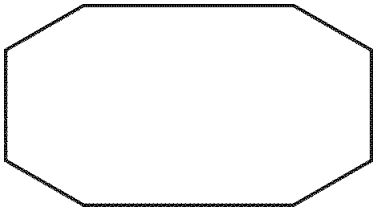


Statement	Reason

Practice #6: Determine the values of *a*, *b,* and *c.*



Practice #7: Determine the sum of the measures of the interior angles of this polygon.



Practice #8: Each interior angle of a regular convex polygon measures 162°.
How many sides does the polygon have?

Practice #9: The interior angles of a regular convex polygon add to 2340°.
How many sides does the polygon have?

Practice #10: Determine the value of *a,b,c, and d.*