3.1 & 3.2
Parallel Lines

Parallel Lines

Parallel Lines: _____

_____

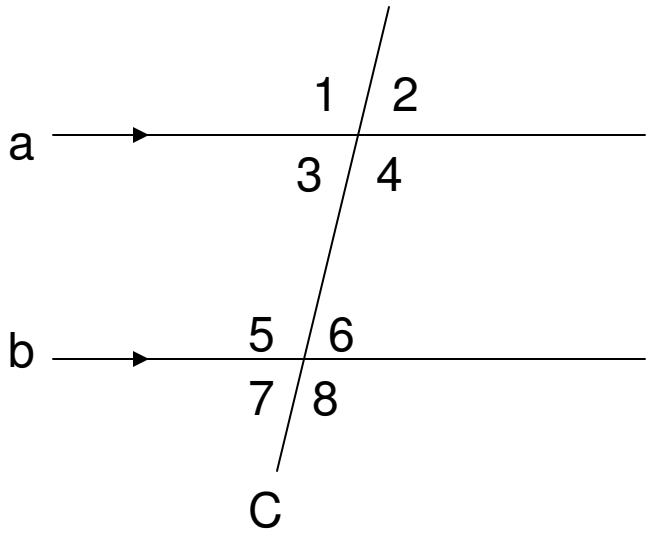
Skew Lines: _____

_____

Transversal: _____

_____

Given: a//b



Transversal:_____

Alternate Interior Angles:_____

Corresponding Angles:_____

Same side Interior Angles:_____

Theorem 3-1: _____

_____

_____

Theorem 3-2: _____

_____

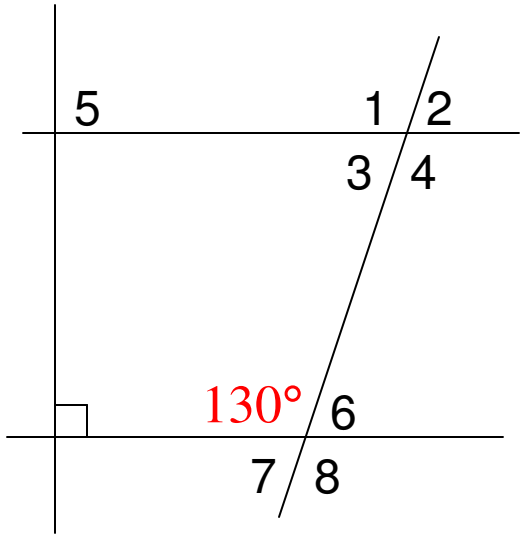
_____

Theorem 3-3: _____

_____

_____

<u>Theorem 3-4:</u> If a transversal is perpendicular to one of two parallel lines, then it is perpendicular to the other parallel line.



$m\measuredangle 1 =$

$m\measuredangle 2 =$

$m\measuredangle 3 =$

$m\measuredangle 4 =$

$m\measuredangle 5 =$

$m\measuredangle 6 =$

$m\measuredangle 7 =$

$m\measuredangle 8 =$

3.3 Day 1
Showing lines are Parallel

Theorem 3-5: _____

_____

_____

Theorem 3-6: _____

_____

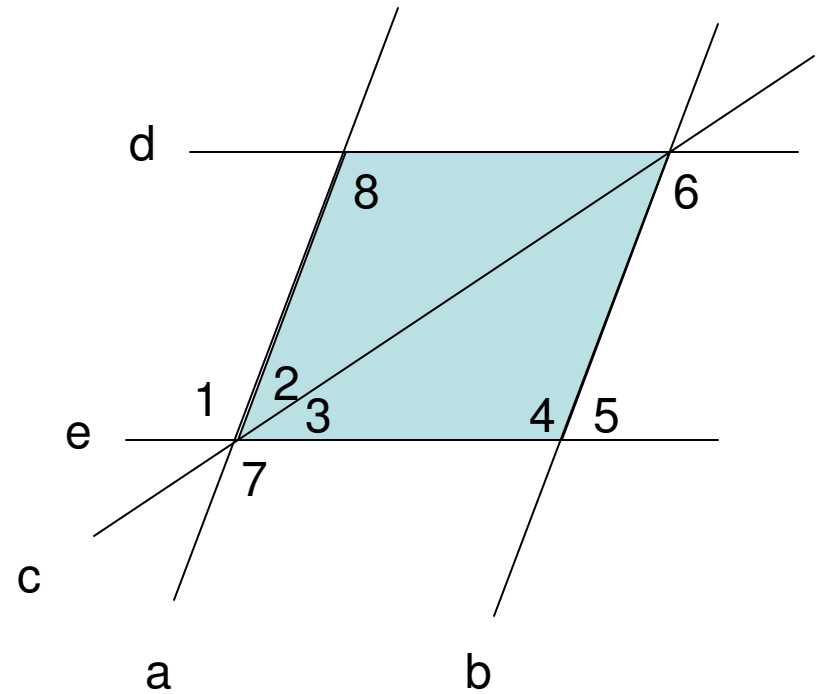
_____

Theorem 3-7: _____

_____

_____

Which lines are parallel if any given the information below:



$\measuredangle 1 \cong \measuredangle 4$

$\measuredangle 6 \cong \measuredangle 4$

$\measuredangle 2 + \measuredangle 3 = \measuredangle 5$

$\measuredangle 2 + \measuredangle 3 + \measuredangle 8 = 180$

$\measuredangle 6 \cong \measuredangle 8$

$\measuredangle 7 \cong \measuredangle 1$

$\measuredangle 1 = \measuredangle 8 = 75$

$\measuredangle 6$ and $\measuredangle 5$ are supp

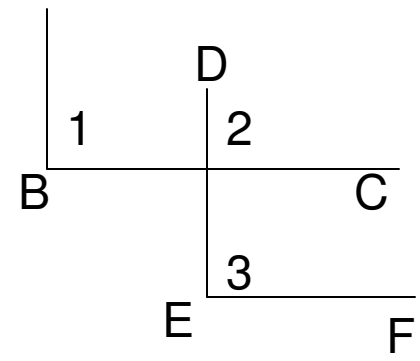
$\measuredangle 4$ and $\measuredangle 5$ are supp

3.3 Day 2
Proofs

Let's do some Proofs!

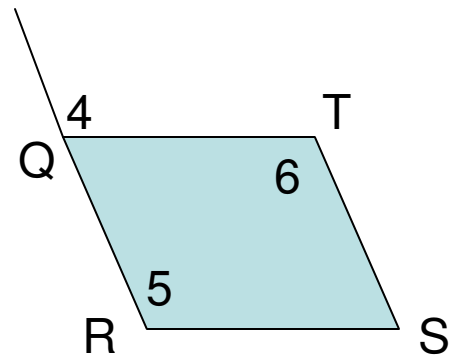
$Given: \measuredangle 1 \cong \measuredangle 2;\ \measuredangle 1 \cong \measuredangle 3$

$\text{Prove}: BC \parallel EF$



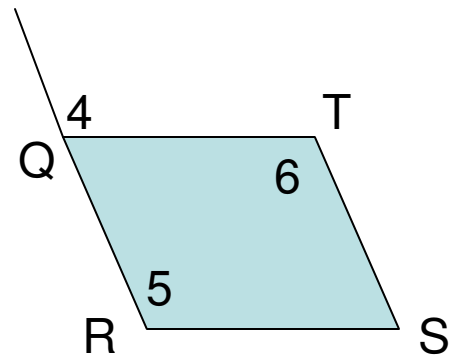
$Given: \measuredangle 5 \cong \measuredangle 6;\ \measuredangle 4 \cong \measuredangle 6$

Prove: $QT \parallel RS$



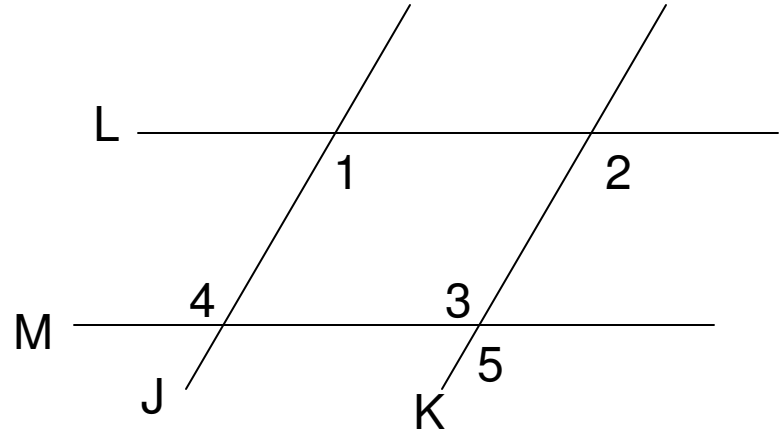
$Given: \measuredangle 5 \cong \measuredangle 6;\ QR \parallel TS$

Prove: $QT \parallel RS$



$Given: \measuredangle 2 \cong \measuredangle 4;\ J \parallel K$

Prove: $L \parallel M$



3.4
Angles of Triangles

Triangles

2 Ways to Classify Triangles:

<u>By Sides</u>

2 Ways to Classify Triangles:

<u>By Angles</u>

_____

_____

_____

The sum of the measures of a Triangle=

Corollary 1: _____

_____

_____

Corollary 2: _____

_____

Corollary 3: _____

_____

_____

Corollary 4: _____

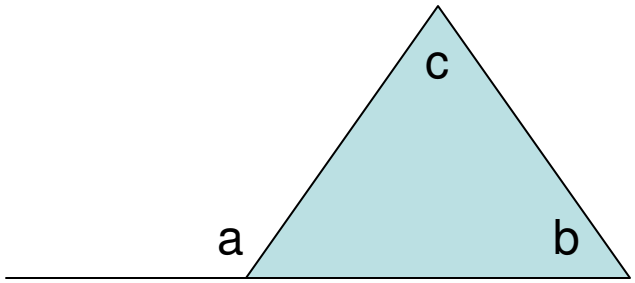
_____

_____

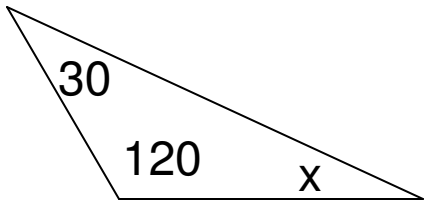
Theorem 3-12: _____

_____

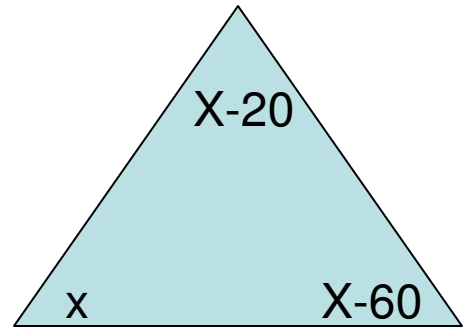
_____



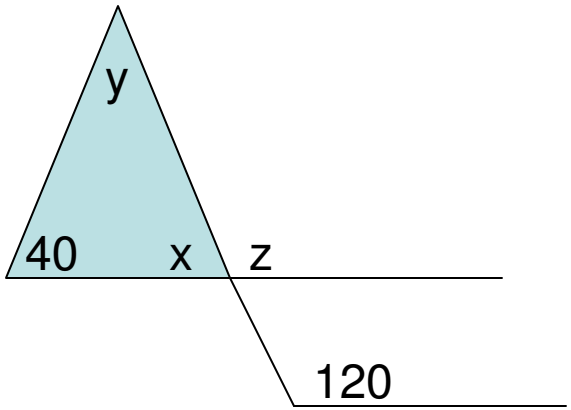
Examples



$x =$ _____



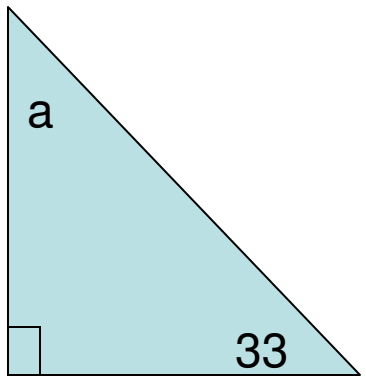
$x =$ _____



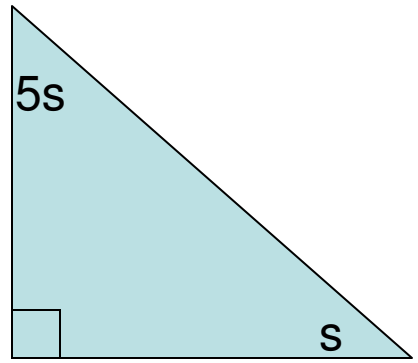
$x =$ _____

$y =$ _____

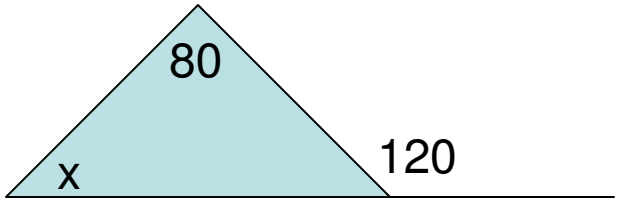
$z =$ _____



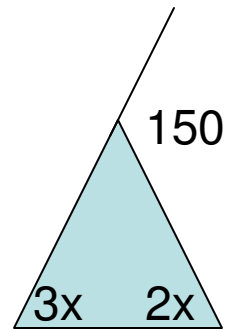
$a =$ _____



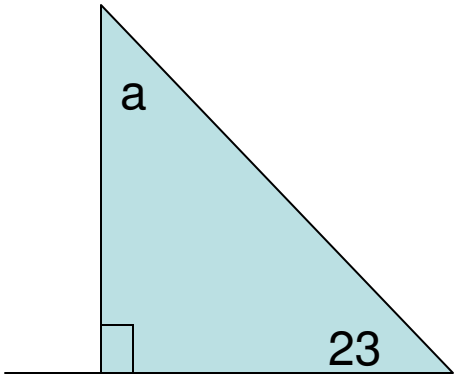
$s =$ _____



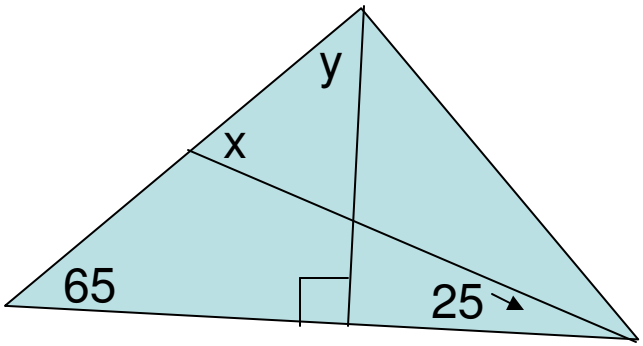
$s =$ _____



$x =$ _____

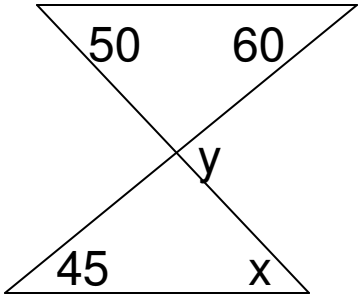


$a =$ _____

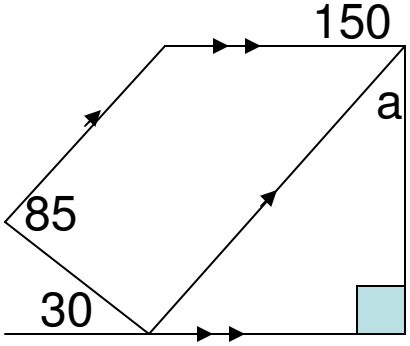


$x =$ _____

$y =$ _____



$x =$ _____ $y =$ _____



$a =$ _____ $b =$ _____

3.5 Polygons

Polygon= _____

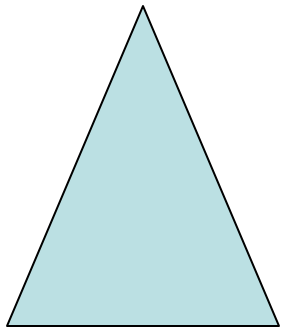
_____

- _____

_____

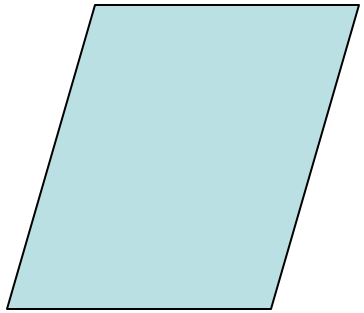
- _____

_____



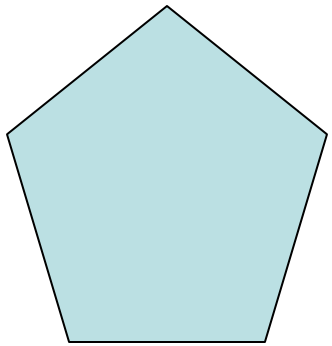
Name : _____

Sum of $\measuredangle$ *'s* : _____



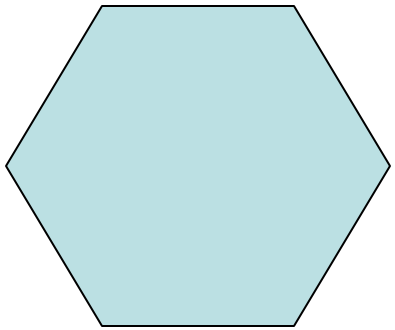
Name : _____

Sum of $\measuredangle$ *'s* : _____



Name : _____

Sum of $\measuredangle$ *'s* : _____



Name : _____

Sum of $\measuredangle$ *'s* : _____

“Regular” Polygon:

- _____

Examples:

A polygon has 32 sides find the sum of the interior and exterior angles.

2. A regular polygon has 12 sides. Find the measure of each interior angle.

3. If 4 exterior angles of a pentagon each measure 70, what is the measure of the 9th angle?

4. On a regular polygon one of the exterior angles is 10 degrees. How many sides does the polygon have and what is the measure of one of interior angles?

Fill in the Chart

	1.	2.	3.	4.	5.	6.
Number of sides	6				20	
Ext. Angle		20		90		
Int. Angle			179			90