Find the measure of each angle.

1.

A 30°
2X
25° 75°
B 5X   5X C
75°

180÷2

12x=180° x=15

2.

K ╫ L
60   60
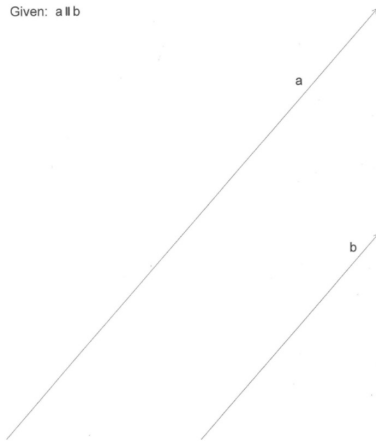╫   ╫
60
J

3x=180

---

1 5
40 50
6
80 7 100
2 70   70 3   8 60   20°
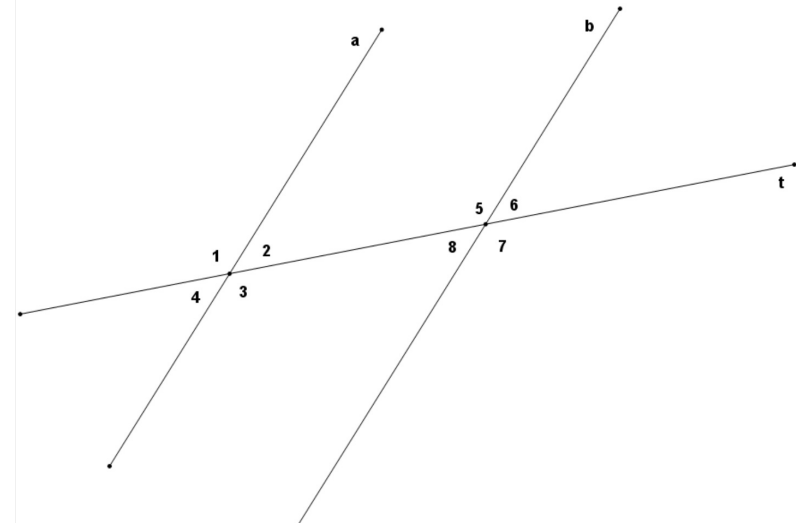10   9
60   60
╫   ╫
60
11
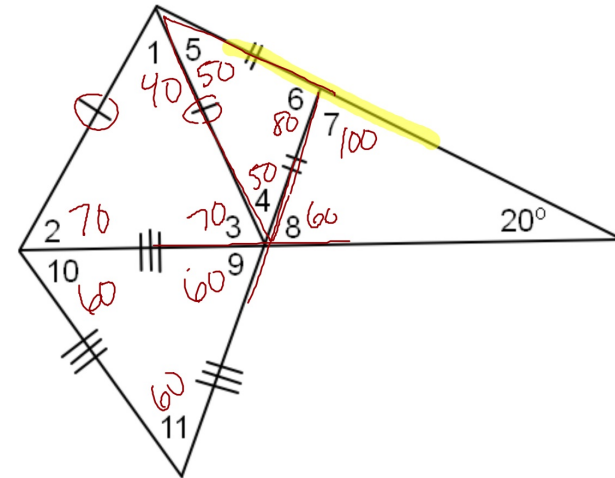
Draw a transversal through lines a and b

Transveral: A line that intersects two other lines.

Given: a ∥ b

a

b

Number the angles the same way as shown here.

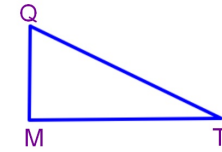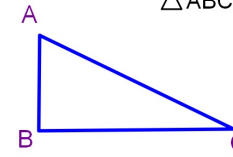a   b

t

5 6
1 2   8 7
4 3

Measure all eight angles. What do you notice?

Compare your results to others.
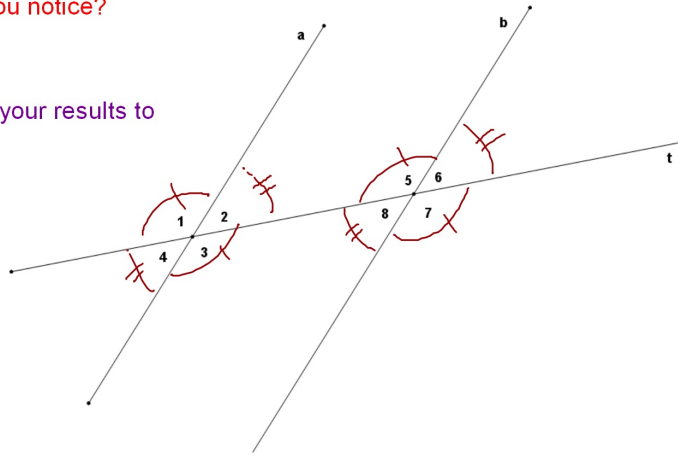
$\triangle ABC \cong \triangle QMT$

Fill in the blanks:
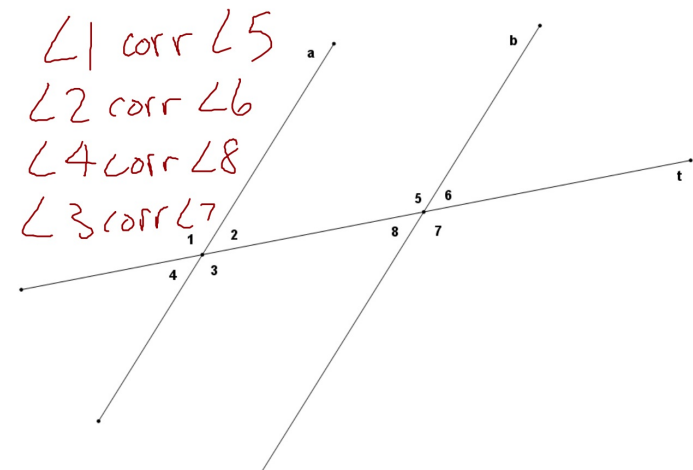
1. $\overline{AB}$ corresponds with _____ $\overline{QM}$ _____

2. Pt C corresponds with _____ pt T _____

Correspond means: Occurs in the same location on each figure

What angle corresponds to Angle 1?

$\angle 1$ corr $\angle 5$
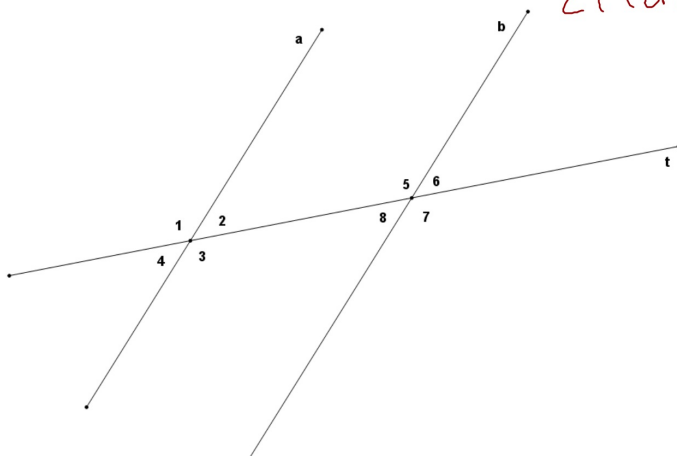
Name all the corresponding angle pairs in this diagram.

$\angle 1$ corr $\angle 5$
$\angle 2$ corr $\angle 6$
$\angle 4$ corr $\angle 8$
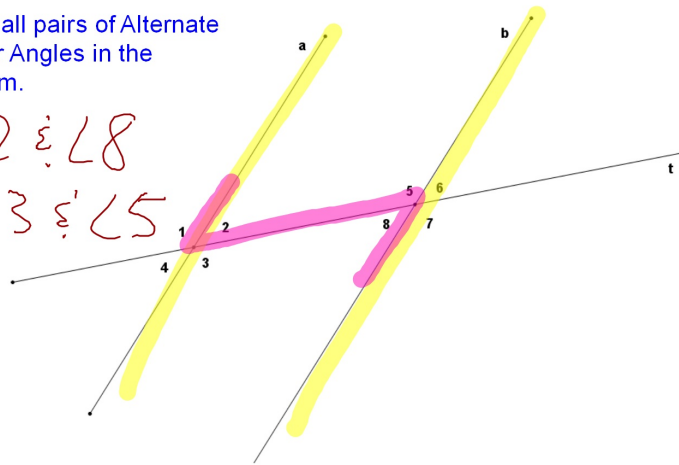$\angle 3$ corr $\angle 7$

Alternate Interior Angles:
        Interior: Inside of the parallel lines.

        Alternate: On opposite sides of the transversal.

Name all pairs of Alternate
Interior Angles in the
diagram.

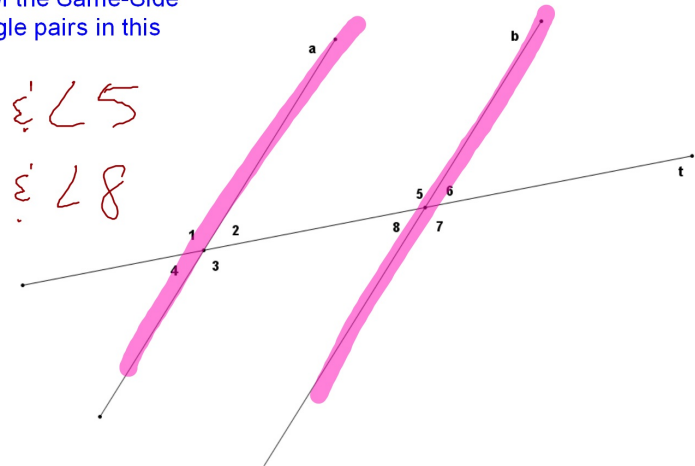$\angle 2$ & $\angle 8$

$\angle 3$ & $\angle 5$

Same-Side Interior Angles:
        Interior: Inside of the parallel lines
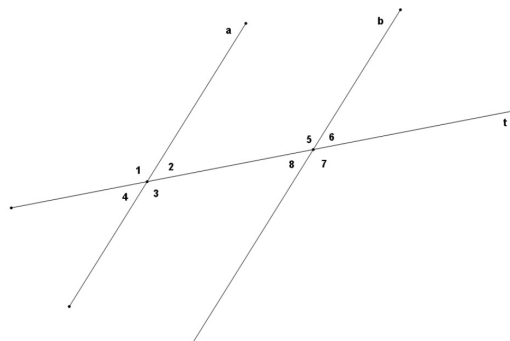
        Same-Side: On the same side of the transversal.

Name all of the Same-Side
Interior Angle pairs in this
diagram.

$\angle 2$ & $\angle 5$

$\angle 3$ & $\angle 8$

Properties of angle pairs in Parallel Lines.

POSTULATE
Corresponing Angles
are CONGRUENT.

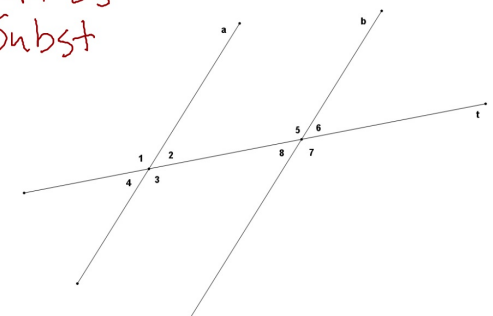| Step		Reason	
1.	$\angle 1 \cong \angle 5$	1.	Corr $\angle$'s
2.	$\angle 1 \cong \angle 3$	2.	Vert $\angle$'s
3.	$\angle 3 \cong \angle 5$	3.	Subst

$\angle 3$ and $\angle 5$ are called
Alternate Interior Angles

THEOREM
Alternate Interior Angles
are CONGRUENT

Step	Reason
1. $\angle 1 \cong \angle 5$	1. Corr $\angle$'s
2. $\angle 1 + \angle 2 = 180°$	2. Suppl.
3. $\angle 5 + \angle 2 = 180°$	3. Subst
4. $\angle 5$ and $\angle 2$ are supplementary	4. Def of suppl

$\angle 5$ and $\angle 2$ are called
Same-Side Interior Angles

THEOREM

Same-Side Interior Angles
are SUPPLEMENTARY