

We did #1-10

Name _____

Geometry Basic Angle Review

For questions 1-5, use the figure at the right to complete each statement.

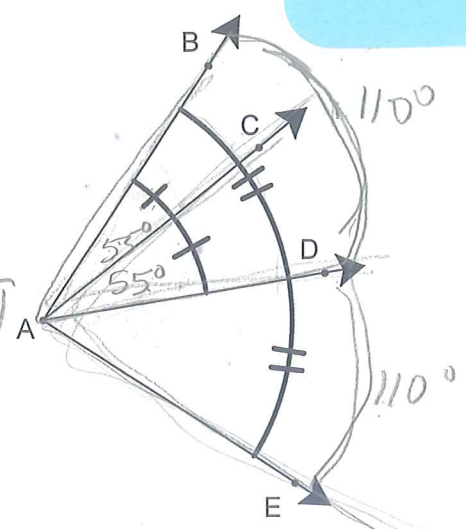
1. A is the vertex of $\angle BAE$.

2. \overrightarrow{AD} is the angle bisector of $\angle BAE$.

3. \overrightarrow{AC} is the angle bisector of $\angle BAD$.

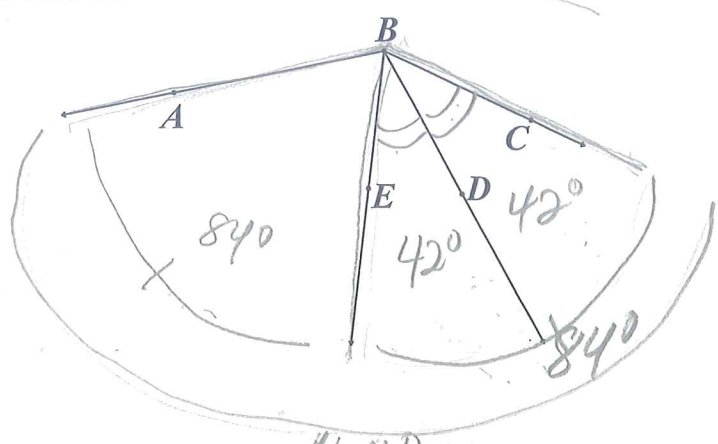
4. If $m\angle BAC = 55^\circ$ then $m\angle CAE = 55 + 110 = 165^\circ$

5. $\angle DAB \cong \angle DAE$.



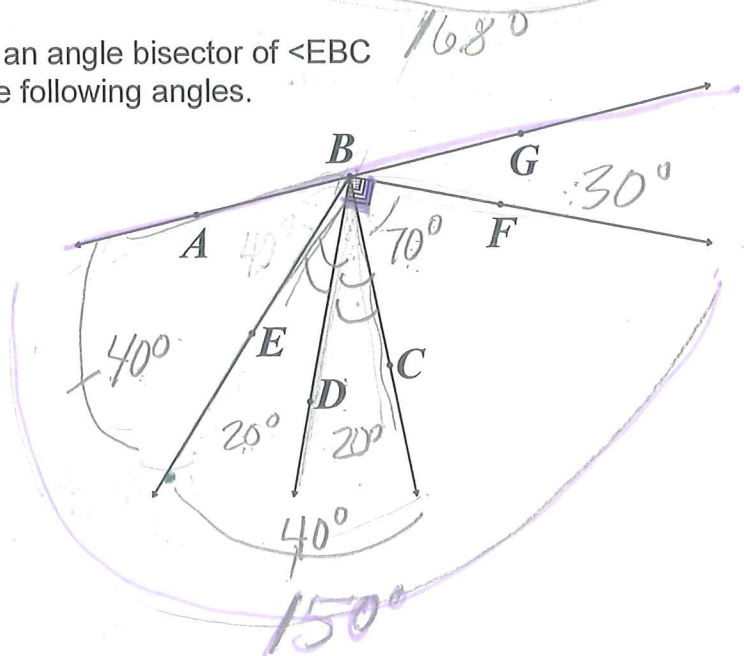
6. \overrightarrow{BE} is an angle bisector of $\angle ABC$ and \overrightarrow{BD} is an angle bisector of $\angle EBC$. If $\angle ABC = 168^\circ$ Find the measures of

- $\angle ABE = 84^\circ$
- $\angle EBC = 84^\circ$
- $\angle EBD = 42^\circ$
- $\angle CBD = 42^\circ$



7. \overrightarrow{BE} is an angle bisector of $\angle ABC$ and \overrightarrow{BD} is an angle bisector of $\angle EBC$. $BD \perp BF$. If $\angle ABE = 40^\circ$, find the measure of the following angles.

- $\angle EBC = 40^\circ$
- $\angle FBG = 30^\circ$
- $\angle GBD = 120^\circ$
- $\angle FBA = 150^\circ$
- $\angle CBD = 20^\circ$
- $\angle CBD = 20^\circ$

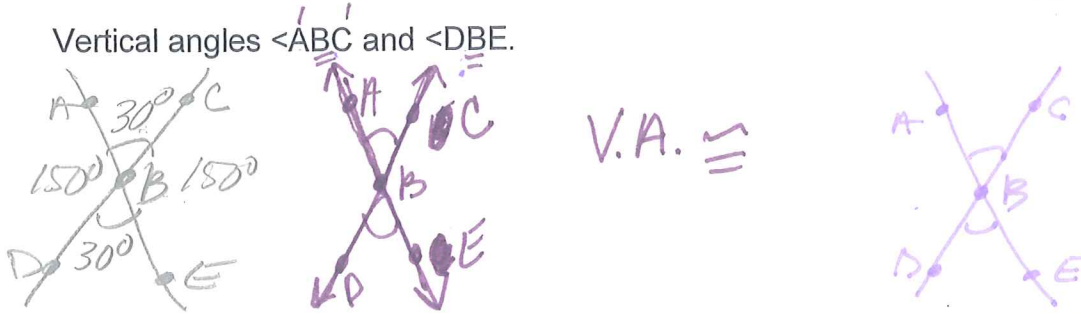


Draw, label, and mark the following figures.

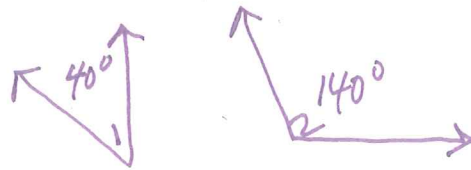
8. Complementary angles $\angle 1$ and $\angle 2$ with $m\angle 1 = 50^\circ$. Show two different drawings of this.



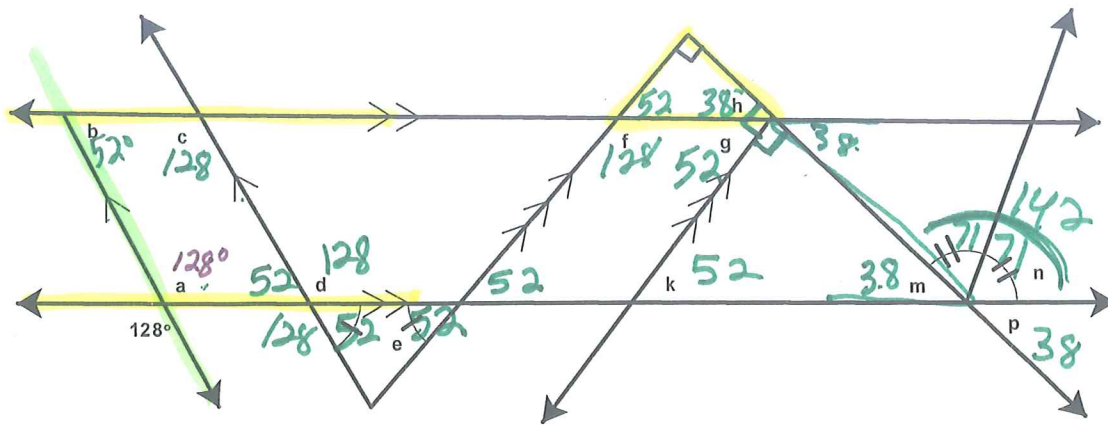
9. Vertical angles $\angle ABC$ and $\angle DBE$.



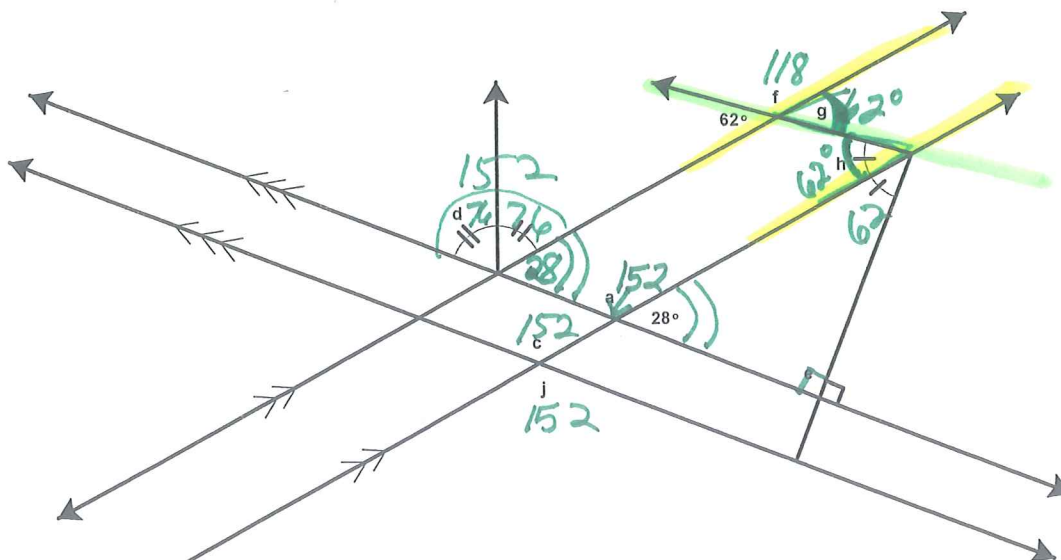
10. Supplementary angles $\angle 1$ and $\angle 2$ with $m\angle 1 = 40^\circ$. Do not draw $\angle 1$ and $\angle 2$ as a linear pair.



11. Fill in all the angles marked with variables with their measures.



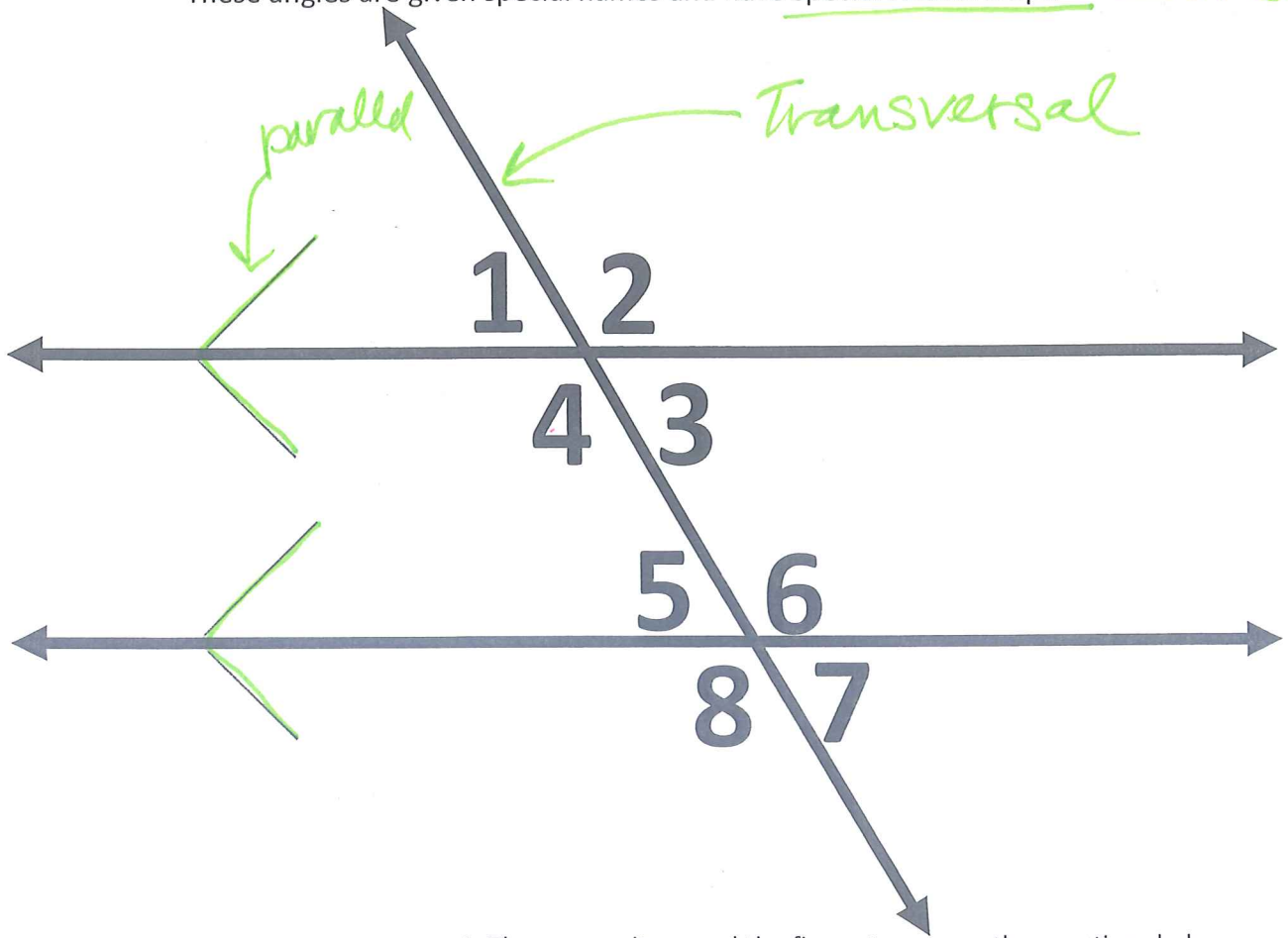
- 12.



Name: _____ Day #1

3-2 Notes: Discovering Angles Formed when 2 || Lines are cut by a Transversal

When a transversal intersects 2 parallel lines, special angles are formed. These angles are given special names and have special relationships. \cong or supp.



In your group, use your patty paper to trace $\angle 1$. Then, move it around the figure to answer the questions below.

How are $\angle 1$ and $\angle 3$ related? \cong vertical

How are $\angle 1$ and $\angle 5$ related? \cong

How are $\angle 1$ and $\angle 7$ related? \cong

Now use your patty paper to trace $\angle 4$. Then, move it around the figure to answer the questions below.

How are $\angle 4$ and $\angle 2$ related? \cong vertical

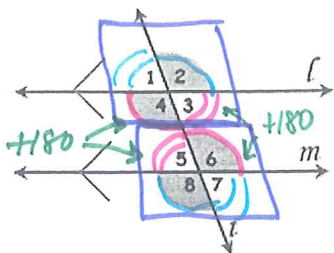
How are $\angle 4$ and $\angle 6$ related? \cong

How are $\angle 4$ and $\angle 8$ related? \cong

How are $\angle 4$ and $\angle 1$ related? Supp L.P.

How are $\angle 4$ and $\angle 5$ related? Supp.

Interior Angles lie between the two lines.
Exterior angles lie outside the two lines.



Alternate Interior Angles are on the opposite sides of the transversal.
 Example: $\angle 3$ and $\angle 5$

$\angle 3 \cong \angle 5$
 or
 $\angle 4 \cong \angle 6$

Alternate Exterior Angles are on the opposite sides of the transversal.
 Example: $\angle 2$ and $\angle 8$

$\angle 2 \cong \angle 8$
 $\angle 1 \cong \angle 7$

Consecutive Interior Angles are on the same side of the transversal.

Example: $\angle 3$ and $\angle 6 = 180$

$\angle 4 + \angle 5 = 180$

Corresponding Angles: an angle on the Exterior and the other in the Interior but on the same side of the transversal.

Example: $\angle 8$ and $\angle 4$

$\angle 2 \cong \angle 6$
 $\angle 1 \cong \angle 5$

$\angle 3 \cong \angle 7$

Please note the following properties.

Alternate interior angles are \cong

Alternate exterior angles are \cong

Corresponding angles are \cong

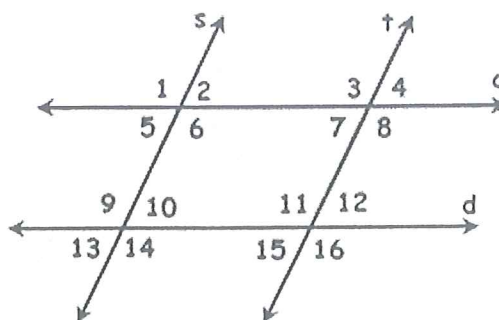
Consecutive interior angles are Supp.

Example:

$s \parallel t$ and $c \parallel d$.

Name all the angles that are congruent to $\angle 1$.

Give a reason for each answer.



$\angle 3 \cong \angle 1$ corresponding angles

$\angle 6 \cong \angle 1$ vertical angles

$\angle 8 \cong \angle 1$ alternate exterior angles

$\angle 9 \cong \angle 1$ corresponding angles

$\angle 14 \cong \angle 1$ alternate exterior angles

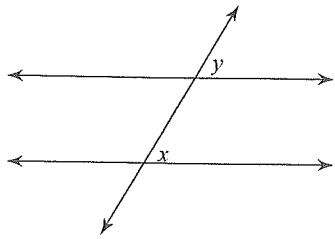
$\angle 11 \cong \angle 9 \cong \angle 1$ corresponding angles

$\angle 16 \cong \angle 14 \cong \angle 1$ corresponding angles

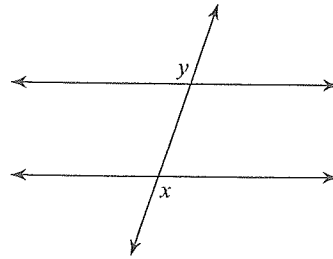
Parallels Cut by a Transversal HW #1

Identify each pair of angles as corresponding, alternate interior, alternate exterior, consecutive interior, or vertical.

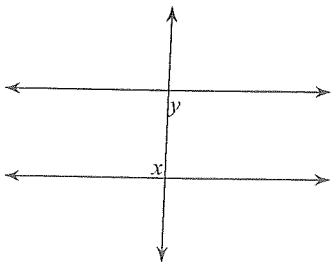
1)



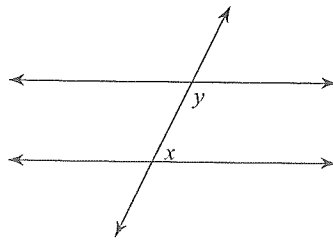
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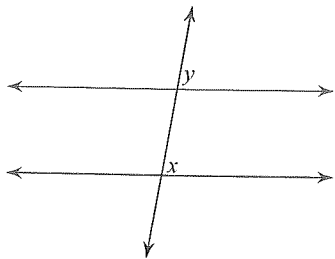
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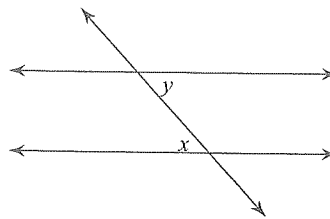
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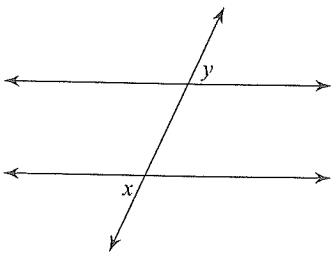
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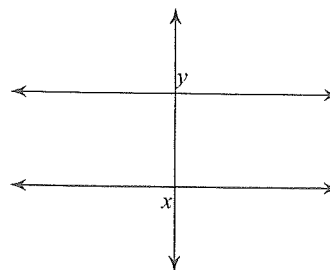
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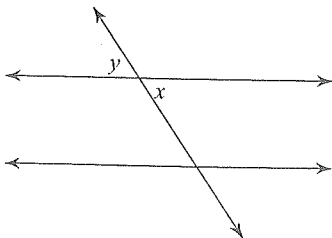
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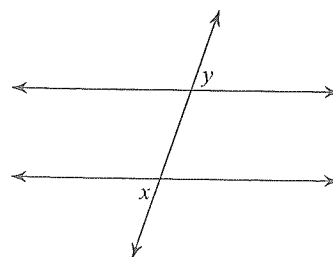
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9)

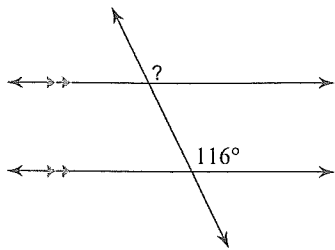


10)

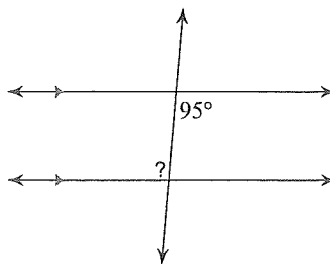


Name the relationship between the ? and the measured angle, then find the measure of each angle indicated.

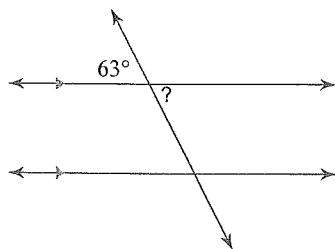
11)



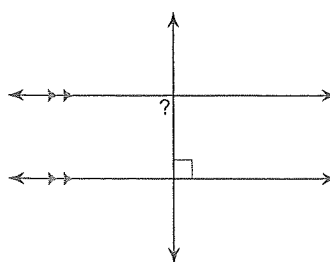
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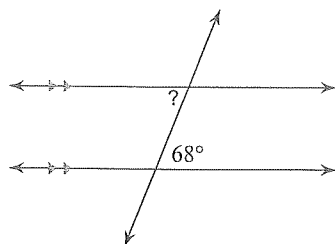
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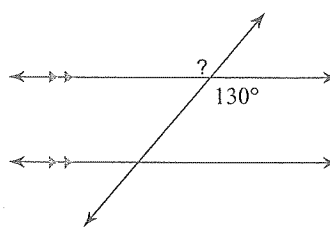
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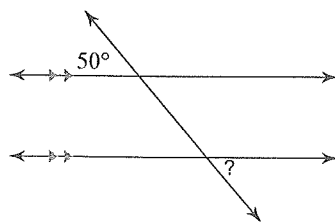
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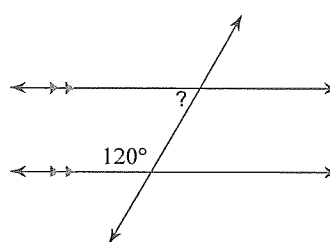
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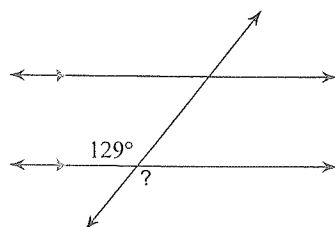
17)



18)



19)



20)

