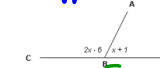
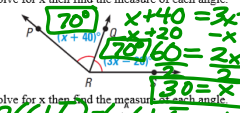
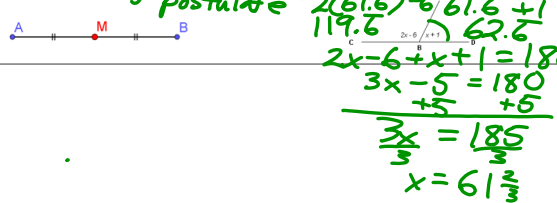


Bell Ringer

Wednesday 1/22


Fill in the blank with the correct vocabulary word:

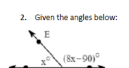
- The diagram shows a linear pair and supplementary angles.

- Solve for x then find the measure of each angle.

- AM + MB = AB. Segment addition postulate. Solve for x then find the measure of each angle.


Questions from Lines and Angles ws?

Name: _____ Hr: _____ Lines and Angles Proofs ws

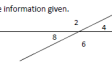
Spend a few minutes looking over the Unit 6: Reasons for proofs sheet. Always start your proofs with the given information and build from there.


- Fill in the blanks on the following proof.
 Given: $\angle 1 \cong \angle 2$
 Prove: $\angle 4 \cong \angle 3$


Statements:	Reasons:
1) $\angle 1 \cong \angle 2$	a) _____
2) $\angle 4 \cong \angle 2$	b) Vertical angles are \cong
3) _____	c) Transitive Property of Congruence
4) $\angle 1 \cong \angle 3$	d) _____
5) $\angle 4 \cong \angle 3$	e) _____
- Given the angles below:


Fill in the reason that justifies each step.	Reasons:
$\angle CDE$ and $\angle EDF$ are supplementary.	\angle that form a linear pair are supplementary.
$m\angle CDE + m\angle EDF = 180$	a. _____
$x + (8x - 90) = 180$	b. _____
$9x - 90 = 180$	c. _____
$9x = 270$	d. _____
$x = 30$	e. _____

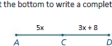
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- Write a complete proof using the information given.
 Given: $\angle 2 \cong 140^\circ$
 Prove: $\angle B \cong 40^\circ$


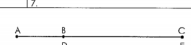
Statements:	Reasons:
1) $\angle 2 \cong 140^\circ$	a) _____
2) $\angle 2$ and $\angle B$ are supplementary	b) _____
3) _____	c) Definition of supplementary
4) $140^\circ + \angle B = 180^\circ$	d) _____
5) _____	e) Subtraction Property
- Complete the proof by filling in the spaces below.
 Given: $JK = 48$
 Prove: $x = 9$


Statements:	Reasons:
1) _____	a) Given
2) $JL + LK = JK$	b) _____
3) _____	c) Substitution Property
4) $5x + 3 = 48$	d) Substitution Property
5) _____	e) _____
6) $x = 9$	f) _____

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- Use the statements and reasons given at the bottom to write a complete proof of the following:
 Given: C is the midpoint of \overline{AD} .
 Prove: $x = 4$



Statements:	Reasons:
1) _____	a) Given
2) $\overline{AC} \cong \overline{CD}$	b) _____
3) $m\overline{AC} = m\overline{CD}$	c) _____
4) _____	d) Substitution Property
5) $2x = 8$	e) _____
6) _____	f) Division Property of Equality
- Given: $\angle AEC \cong \angle DEB$
 Prove: $\angle AEB \cong \angle DEC$



Statements:	Reasons:
1. $\angle AEC \cong \angle DEB$	1. _____
2. $m\angle AEC = m\angle DEB$	2. _____
3. $m\angle AEB + m\angle BEC = m\angle AEC$	3. _____
4. $m\angle BEC + m\angle DEC = m\angle DEB$	4. _____
5. $m\angle AEB + m\angle BEC = m\angle BEC + m\angle DEC$	5. _____
6. $m\angle AEB = m\angle DEC$	6. _____
7. $\angle AEB \cong \angle DEC$	7. _____
- Given: $\overline{BC} \cong \overline{DE}$
 Prove: $AC = AB + DE$


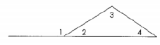
Statements:	Reasons:
1. $\overline{BC} \cong \overline{DE}$	1. _____
2. $BC = DE$	2. _____
3. $AC = AB + BC$	3. _____
4. $AC = AB + DE$	4. _____

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- Given: B is between A and D; C is between A and D
 Prove: $AB + BD = AC + CD$


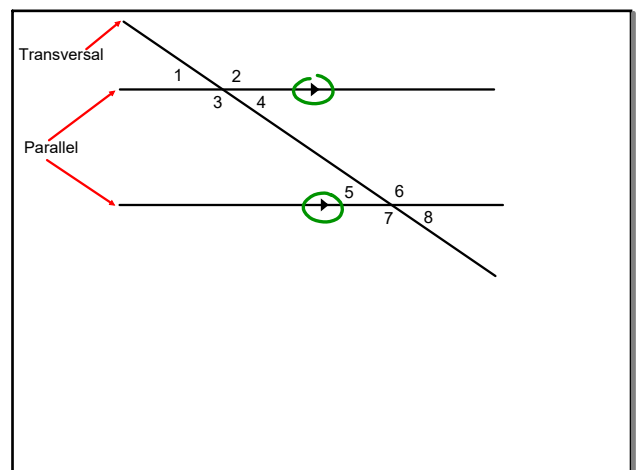
Statements:	Reasons:
1. B is between A and D; C is between A and D	1. _____
2. $AB + BC = AC$	2. _____
3. $AC + CD = AD$	3. _____
4. $AB + BC + CD = AD$	4. _____
5. $AB + BD = AC + CD$	5. _____
- Given: A, B, and C are collinear; $AB = BD$; $BD = DC$
 Prove: B is the midpoint of \overline{AC}


Statements:	Reasons:
1. _____	1. Given
2. _____	2. Transitive Property of Equality
3. _____	3. Definition of Congruent Segments
4. _____	4. Definition of Midpoint
- Given: $\overline{AB} \perp \overline{BC}$; $m\angle 2 = m\angle 3$
 Prove: $m\angle 1 + m\angle 3 = 90^\circ$


Statements:	Reasons:
1. $\overline{AB} \perp \overline{BC}$; $m\angle 2 = m\angle 3$	1. _____
2. _____	2. _____
3. _____	3. _____
4. _____	4. _____
5. _____	5. _____
6. $m\angle 1 + m\angle 3 = 90^\circ$	6. _____
- Given: $\angle 1$ and $\angle 2$ form a linear pair;
 $m\angle 2 + m\angle 3 + m\angle 4 = 180^\circ$
 Prove: $m\angle 1 = m\angle 3 + m\angle 4$


Statements:	Reasons:
1. $\angle 1$ and $\angle 2$ form a linear pair	1. _____
2. $\angle 1$ and $\angle 2$ are supplementary	2. _____
3. $m\angle 1 + m\angle 2 = 180^\circ$	3. _____
4. $m\angle 1 + m\angle 2 = 180^\circ$	4. _____
5. $m\angle 2 = m\angle 3 + m\angle 4$	5. _____
6. $m\angle 1 + m\angle 2 = m\angle 3 + m\angle 4 + m\angle 2$	6. _____
7. $m\angle 1 = m\angle 3 + m\angle 4$	7. _____

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Corresponding Angles: The angles that occupy the same relative position on the transversal. These angles are equal.
 Ex: 1 and 5; 2 and 6; 3 and 7; 4 and 8

Alternate Interior Angles: The angles inside the parallel lines and on opposite sides of the transversal. These angles are equal.
 Ex: 3 and 6; 4 and 5

Alternate Exterior Angles: The angles outside the parallel lines and on opposite sides of the transversal. These angles are equal.
 Ex: 1 and 8; 2 and 7

Consecutive Interior Angles: The angles inside the parallel lines and on the same side of the transversal. These angles are supplementary.
 Ex: 3 and 5; 4 and 6

Vertical Angles: The angles opposite of one another on two intersecting lines. These angles are equal.
 Ex: 1 and 4; 2 and 3; 5 and 8; 6 and 7

Adjacent angles: Angles next to each other on the same side of a line. These angles are supplementary.
 Ex: 1 and 2; 1 and 3; 2 and 4; 3 and 4; 5 and 6; 5 and 7; 6 and 8; 7 and 8

Identify Each pair of angles as:

- Corresponding
- Alternate Interior
- Alternate Exterior
- Consecutive Interior
- Vertical
- Adjacent

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Identify Each pair of angles as:

- Corresponding
- Alternate Interior
- Alternate Exterior
- Consecutive Interior
- Vertical
- Adjacent

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Identify Each pair of angles as:

- Corresponding
- Alternate Interior
- Alternate Exterior
- Consecutive Interior
- Vertical
- Adjacent

Linear Pair

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Identify Each pair of angles as:

- Corresponding
- Alternate Interior
- Alternate Exterior
- Consecutive Interior
- Vertical
- Adjacent

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Identify Each pair of angles as:

- Corresponding
- Alternate Interior
- Alternate Exterior
- Consecutive Interior
- Vertical
- Adjacent

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Identify Each pair of angles as:

Corresponding
 Alternate Interior
 Alternate Exterior
 Consecutive Interior
 Vertical
 Adjacent

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Due Friday

Secondary Math II
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Parallel Lines and Transversals ws

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

1) consecutive int.
 2) vertical
 3) adjacent
 4) corresponding
 5) Alt. Int.
 6) adjacent
 7) Correspond.
 8) Alt. ext.
 Find the measure of each angle indicated.
 9) $180 - 51$
 10)
 11)
 12)

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13)
 14)
 15)
 16)
 Solve for x.
 17) $2x = 14$
 $12x - 11 = 10x + 10$
 $2x = 21$
 $x = 10.5$
 18) $x = 10$
 19)
 20)
 21)
 22)
 23)
 24) $x = 9$
 $3 + 7x = 6 + 6x$
 $3 = 6 - 6x + 7x$
 $3 = 6 + x$
 $x = 9$

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