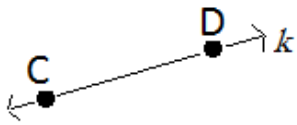
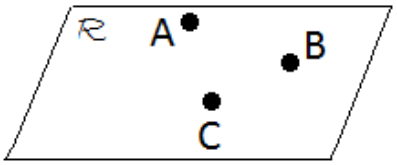
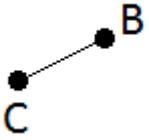
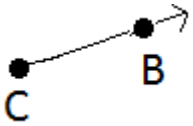
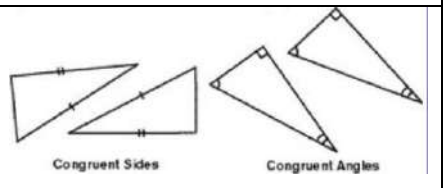
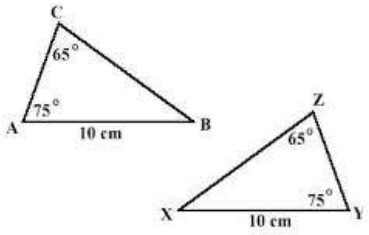
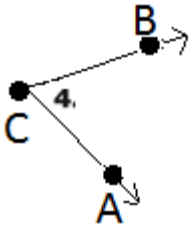
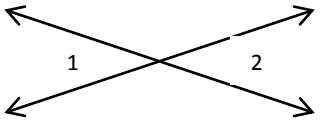
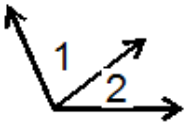
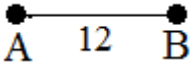
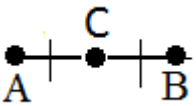
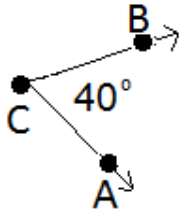
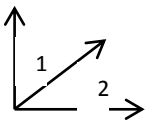
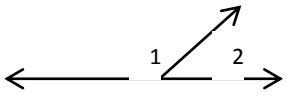
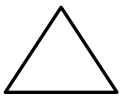
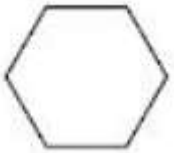
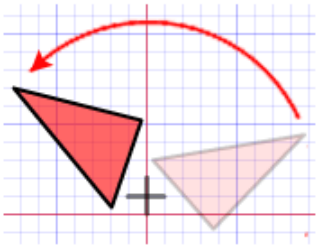
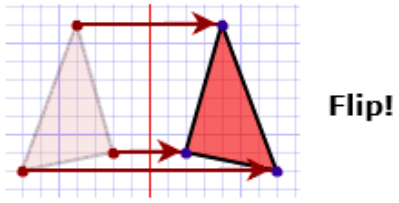
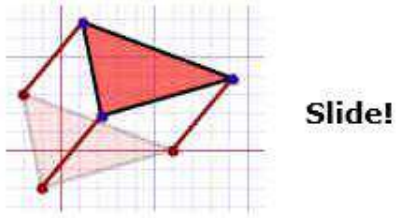
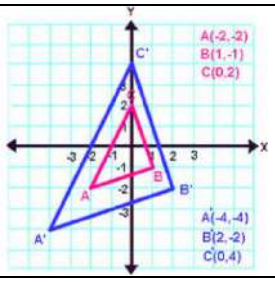
UNIT 2: TRANSFORMATIONS & CONGRUENCE

LESSON 1: BASIC TERMS OF GEOMETRY

VOCABULARY	DEFINITION	NAME/ NOTATION	EXAMPLE
POINT	A location in space. - No - No width -		
LINE	An infinite set of points that extend endlessly in two directions. - Infinite length - No - No thickness		
PLANE	A set of at least 3 non-collinear points that creates a flat surface and extends infinitely in all directions. - Infinite - Infinite - No thickness		
SEGMENT	A set of all points (line) between two endpoints. - Measurable length -		
RAY	A set of points extending infinitely in only one direction. One endpoint		
CONGRUENT	Two figures or objects are congruent if they have the same shape, size, and measure		

SIMILAR	In Geometry, two shapes are Similar if the only difference is size		
ANGLE	Formed by two lines or rays extending from the same point. Measured in degrees		
VERTICAL ANGLES	Two angles such that the sides of one angle are opposite rays to the side of the other angles.		
ADJACENT ANGLES	Angles that share a		
DISTANCE	The measure of length between two points.		
MIDPOINT	A point that divides the segment into two congruent segments.		
ANGLE MEASURE	The amount of turn between the two arms and is usually measured in degrees or radians, measured with a protractor		
COMPLEMENTARY ANGLES	Two angles whose measures have the sum of		
SUPPLEMENTARY ANGLES	Two angles whose measures have the sum of		

TRIANGLE	A plane figure with three straight sides and three angles, total sum of angles is 180°		
POLYGON	A plane figure with at least three straight sides and angles, and typically five or more		
ROTATION	Turns a figure through an angle about a fixed point		
REFLECTION	A 'flip' of a shape over the line of **reflection**		
TRANSLATION	"slides" an object a fixed distance in a given direction. The original object and its translation have the same shape and size, and they face in the same direction		
DIALATION	A transformation that produces an image that is the same shape as the original, but is a different size		

NAME _____ DATE _____

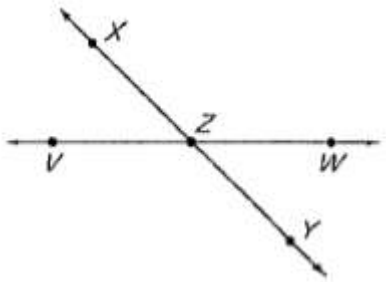
PRACTICE: BASIC TERMS OF GEOMETRY

POINTS

A point has no _____ or _____.

We represent a point with a _____ _____ letter.

1. Name any three points in the diagram below: _____



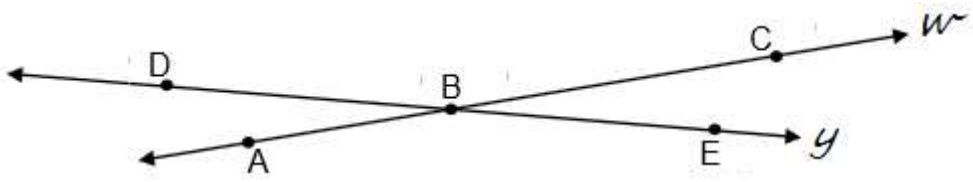
LINES

We can name a line with one _____ letter or we using ____ points on the line with a _____ symbol on top.

A line has no _____ or no _____.

2. Can we draw a line that is 12 cm long? _____

3. Using the diagram below to name 2 lines using both methods for each line: _____



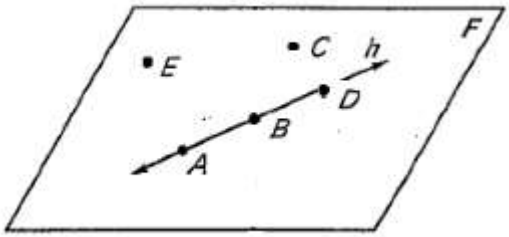
PLANES

We represent planes with a 4 sided figure.

A plane extends infinitely in _____ directions and has no _____.

We name a plane with a _____ or ____ upper case letters.

4. Name the plane bellow 3 different ways: _____



5. Is ABD an appropriate name for this plane? Why or why not?

_____

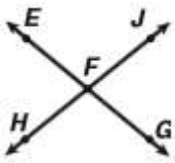
_____

SEGMENT

A segment has ____ endpoints.

6. Can we find the length of a segment? _____

10. Use the diagram below to name 3 segments using the proper notation:

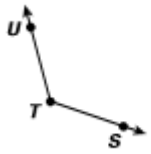


RAY

A Ray has only ____ endpoint and extends infinitely in _____ direction.

When naming a ray the letter of the _____should always come first and we use a _____ symbol on top. This symbol should always point to the _____.

11. Use the diagram below to name 2 rays: _____



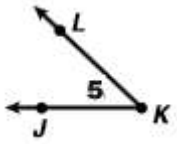
ANGLES

Angles are formed when 2 _____ or rays _____meet at the same _____.

12. We can name an angle in several ways; use each method to name the angle in the diagram below:

_____

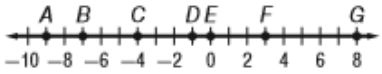
13. Name the vertex and sides of the angle. _____



DISTANCE

What is the difference in the segment and distance notation? _____

Use the number line to find each measure.



1. BD
2. DG
3. AF
4. EF
5. BG
6. AG
7. BE
8. DE

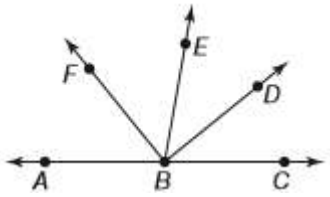
CONGRUENT

The symbol for congruence is _____.

When showing two segments are congruent we use _____ marks.

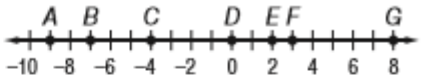
13. Label the diagram below to show $\overline{AB} \cong \overline{CD}$.

14. Label the diagram below to show <ABF ≅ <CBD



MIDPOINT

Use the number line to find the coordinate of the midpoint of each segment.



1. $\overline{CE}$
2. $\overline{DG}$
3. $\overline{AF}$
4. $\overline{EG}$
5. $\overline{AB}$
6. $\overline{BG}$
7. $\overline{BD}$
8. $\overline{DE}$

UNIT 2 LESSON 1 PRACTICE:

Name each figure using the correct notation.

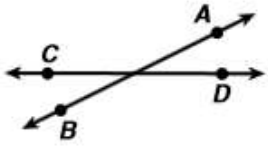
1. 

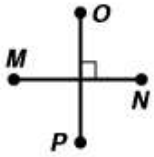
2. 

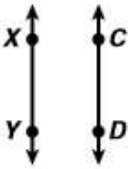
3. 

_____ _____ _____

Write *parallel*, *intersecting*, or *perpendicular* to describe the relationship between each pair of lines.

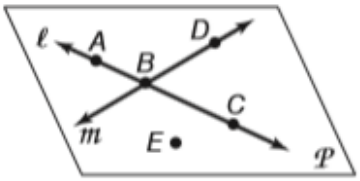
4. 

5. 

6. 

_____ _____ _____

7. Name the plane in 2 different ways.

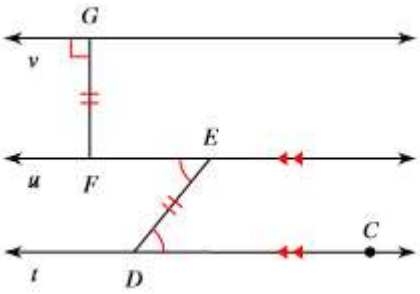


8. What is another way to name line *m*.

9. Name the point where line *m* and *l* intersect.

10. Name 3 angles in the diagram.

Use this diagram to answer questions 11&12.



11. Name a pair of congruent angles.

12. Name a pair of congruent segments.