Name:_____ Date: _____ Period:_____

Sec 1H Unit 6 Day 1 - Vocabulary and Notation Classwork

$_\bullet G$

J

$E_\bullet$

H

$D_\bullet$

I
$_\bullet$

B

C
$_\bullet$

$K_\bullet$

F

$_\bullet$
A
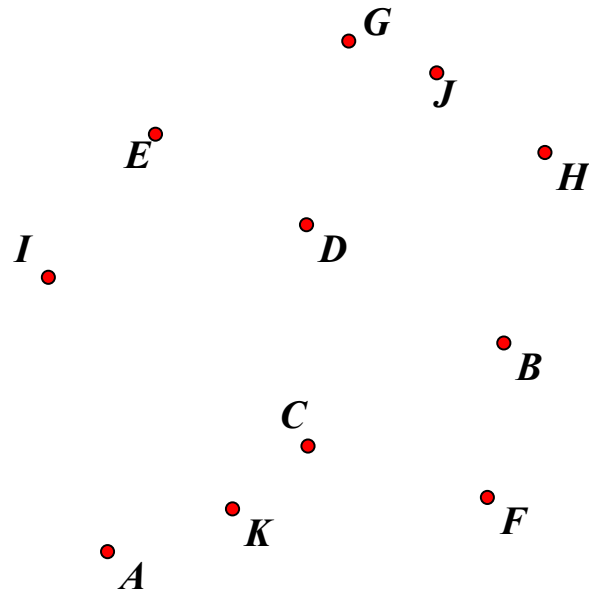
1. Name three points: _____

2. Draw point M and point N: Name the points: _____

3. Do any of the points in the picture have lower case letters? _____
   What is the proper notation for points? _____

4. Use a ruler to connect points I and F. This is line segment $\overline{IF}$. The notation for line segments is written using only the <u>endpoints</u> of the segment with a bar on top.
   This segment could also be written as $\overline{FI}$.
   Now connect points I and J. Name the segment you have drawn: _____

5. Use a ruler to connect points B and D, going through D. (Going through a point means extending it a little way and adding an arrow on the end.) This is ray $\overrightarrow{BD}$. The notation for rays is written with the endpoint first, then a second point that is on the ray, with an arrow on top <u>always</u> pointing to the right.

   Now connect points B and E, going through E. Name the ray you have drawn: _____

   Is there another way to name this ray? Explain your reasoning.

M   J

E

H

I

D

B

C

G

F

A
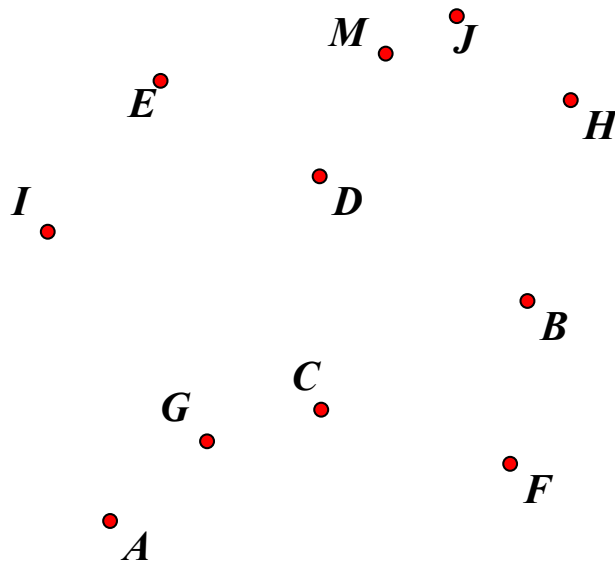
6. Use your ruler to connect points A and B, going through both points. This is line $\overleftrightarrow{AB}$. The notation for lines is written using any two points on the line, in any order. <u>Exactly two points are used</u>, even if there are more points visible on the line.

Another name for this line is $\overleftrightarrow{CA}$. List the other four names for this line: _____

*Sometimes a single, lower-case, cursive letter can be used to name a line. For example: line m

7. We have discussed points, line segments, rays and lines. Which one(s) of these can you measure?

_____

The notation to represent the measure of a line segment is to leave the bar off the top, so AB would be read, "the measure of segment AB" and would equal a number that is the length of the segment.

Write the notation for "the measure of segment DF": _____

8. Use your ruler to connect points I and J, going through both points.

Extend the line out at least 2 cm on each side. Also extend $\overleftrightarrow{AB}$.

What do you notice about the two lines?_____

Explain your reasoning: _____

The notation to show two lines are parallel is to use this symbol: || We would write $\overleftrightarrow{AB} \,||\, \overleftrightarrow{IJ}$ to show two lines are parallel, but on the diagram we would place arrows ≫ on the parallel lines. Mark the parallel lines on the diagram.

9. Use your ruler to draw $\overleftrightarrow{FM}$ and $\overleftrightarrow{DH}$. Label the point where they intersect R. Use a corner of a sheet of paper to verify that the intersection forms a right angle. $\overleftrightarrow{FM}$ and $\overleftrightarrow{DH}$ are perpendicular. The notation to show perpendicular is this symbol: ⊥ . We would write $\overleftrightarrow{FM} \perp \overleftrightarrow{DH}$, but on the diagram we would add a right angle symbol: ∟ to show they are perpendicular. Mark the right angle on the diagram.

M J

E

3 H

I

D

2 B

C

G

F

A
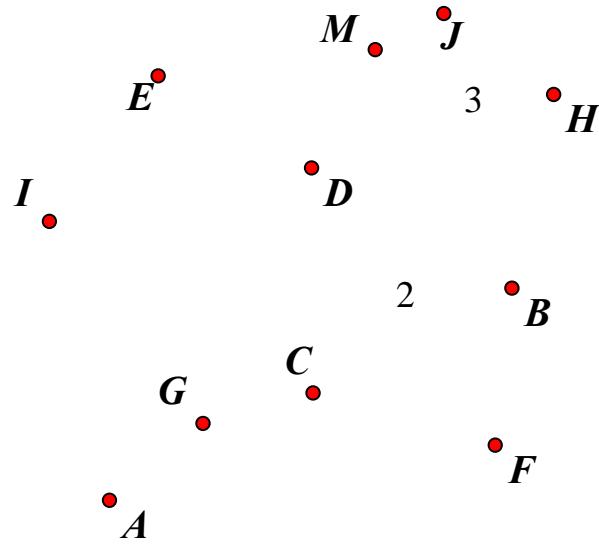
10. Draw $\overrightarrow{BA}$ and $\overrightarrow{BE}$. Two rays that share a common endpoint (the vertex) form an angle. Sometimes the vertex can be used to name the angle, such as <B. Three letters can also be used, with the vertex always going in the middle, and one point from each ray on either side. This angle could be named <ABE or <DBA. Angles can also be named using a number in the interior.

Write three other names for <ABE: _____

11. Angles are measured with a protractor and line segments are measured with a ruler. The notation to represent the measure of an angle is to put an 'm' in front of the angle name, such as m<DBA. This is read, "the measure of angle DBA." Write the notation for "the measure of angle B": _____

12. *Write the correct **notation** for the description given.*

Symbol for perpendicular   The measure of angle G

Symbol for parallel   The line through the points V and C

The length of $\overline{AB}$ The segment with endpoints S and L

The ray starting at Q and going through Z   The angle consisting of $\overrightarrow{HR}$ and $\overrightarrow{HW}$.

13. Use correct notation and give **ALL** the names for the following figures.

4

A

C

B

K

J

L

H

G

F

T

W

O
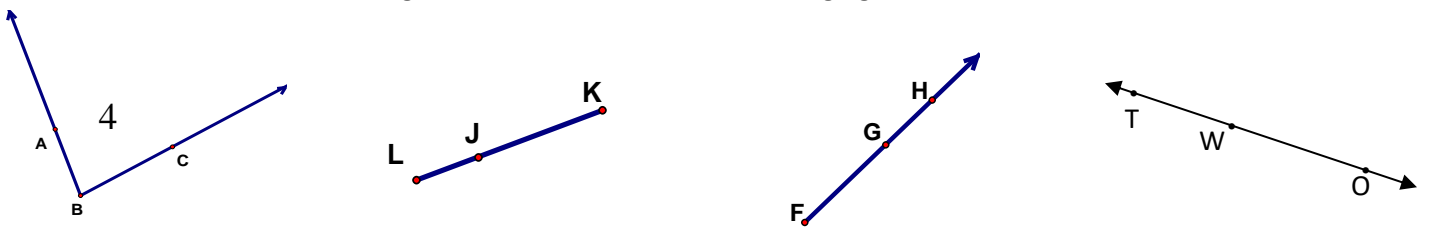
14. Explain the difference between a line and a line segment.