Questions on Disclosure?

You will be having your first content mastery quiz on your disclosure, so get it out and review!

Feb 27-8:47 AM

Content Mastery
Quiz: Disclosure

Feb 19-2:36 PM

What are some things effective groups do to solve a problem? Work on a task?

NORMS B3

- use different skills to work together
- compare different opinions
- help others understand what's going on.
- be considerate of others' opinions
- work as a team, sharing responsibilities
- discuss different methods of solving problem to find the best.
- Communicating well
- stay focused
- be positive

**Grab a SM2 Volume 1 book, and tear out ALL of chapter 1 (pages 1-116); they will tear out pretty easily if you grab all the pages at once.

Let's Get This Started!

Points, Lines, Planes, Rays, and Line Segments

1.1

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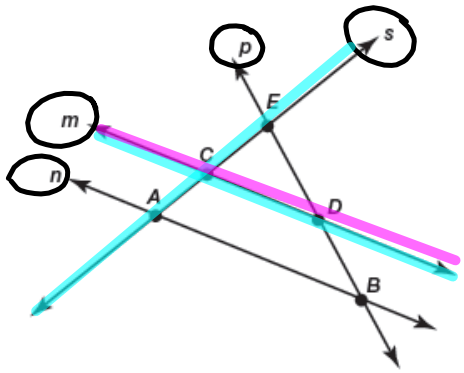
There are three essential building blocks of geometry—the point, the line, and the plane. These three terms are called undefined terms; we can only describe and create mathematical models to represent them.

A **point** is described simply as a location. A point in geometry has no size or shape, but it is often represented using a dot. In a diagram, a point can be labeled using a capital letter.

A point not a

A **line** is described as a straight, continuous arrangement of an infinite number of points. A line has an infinite length, but no width. Arrowheads are used to indicate that a line extends infinitely in opposite directions. In a diagram, a line can be labeled with a lowercase letter positioned next to the arrowhead.

A mathematical model of several points and lines is shown.



1. Does the name "line C" describe a unique line? Explain why or why not.

No, "line C" could mean line s or m, we don't have enough information

2. Does the name "line CD" describe a unique line? Explain why or why not.

Yes, we know "line CD" is talking about line m.

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3. Does the name "line *m*" describe a unique line? Explain why or why not.

Yes, . . .

4. How many points are needed to name a specific line?

Two.

$\overrightarrow{AB}$

$\overleftrightarrow{AB}$

5. What is another name for line *AB*?

line n or line BA

Line *AB* can be written using symbols as $\overleftrightarrow{AB}$ and is read as "line *AB*."

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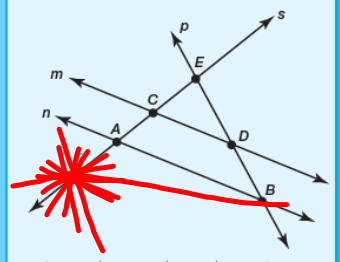
YOU WORK ON #6, 7, AND 8 ON PG. 5 IN STUDENT TEXT

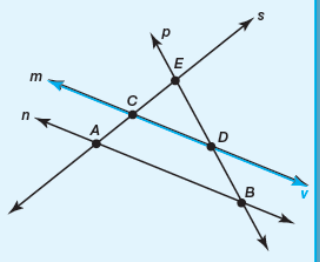
6. Analyze each model and explanation.

Brad



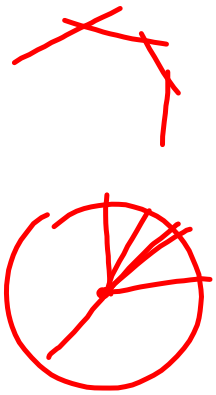
I drew point T on line s. Since only one line goes through T, point T describes just one line.

Kara



I drew line v through points C and D. So, line CD describes two lines.

Describe the inaccuracy in each students' reasoning.



Collinear points are points that are located on the same line.

7. How many lines can be drawn through a single point?

Infinity

8. Use the diagram shown prior to Question 1.

a. Name three points that are collinear.

E, C, A or
B, D, E

b. Name three points that are not collinear.

C, D, E

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A plane is described as a flat surface. A plane has an infinite length and width, but no depth, and extends infinitely in all directions. One real-world model of a plane is the surface of a still body of water. Three non-collinear points describe a unique plane, but planes are usually named using one italic letter located near a corner of the plane as drawn.

Three planes can intersect in a variety of ways or may not intersect at all.

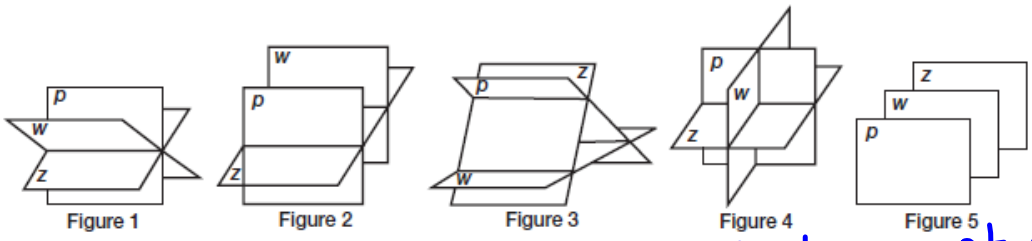
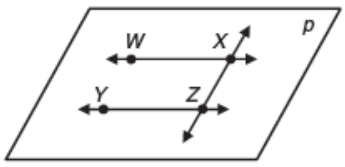


Figure 1 Figure 2 Figure 3 Figure 4 Figure 5

one line 2 lines 2line point not at all

NOT IN YOUR BOOK, COPY INTO YOUR NOTES

1. Identify each of the following in the figure shown.



a. Name all points. W, X, Y, Z

b. Name all lines. $\overleftrightarrow{WX}$, $\overleftrightarrow{XZ}$, $\overleftrightarrow{YZ}$

c. Name all planes. P

HW: finish pgs. 3-7 in student text

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Coplanar lines are two or more lines that are located in the same plane. **Skew lines** are two or more lines that do not intersect and are not parallel. Skew lines do not lie in the same plane.

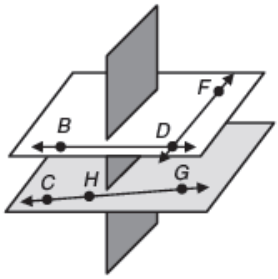
NOT IN YOUR BOOK, COPY INTO YOUR NOTES

2. Identify each of the following in the figure shown.

a. Name all collinear points.

b. Name all coplanar lines.

c. Name all skew lines.



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A **ray** is a part of a line that begins with a single point and extends infinitely in one direction. The **endpoint of a ray** is the single point where the ray begins.

A ray is named using two capital letters, the first representing the endpoint and the second representing any other point on the ray. Ray *AB* can be written using symbols as $\overrightarrow{AB}$, which is read as "ray *AB*."

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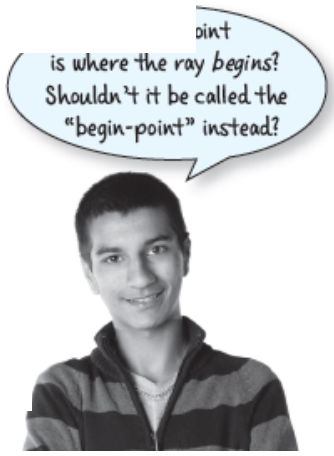
A **line segment** is a part of a line that includes two points and all of the collinear points between the two points. The **endpoints of a line segment** are the points where the line segment begins and ends.

A line segment is named using two capital letters representing the two endpoints of the line segment. Line segment *AB* can be written using symbols as $\overline{AB}$, which is read as "line segment *AB*."

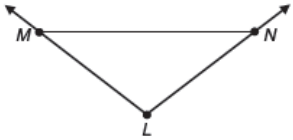
NOT IN YOUR BOOK, COPY PROBLEM INTO NOTES



3. Identify each of the following in the figure shown.

a. Name all rays and identify each endpoint.

b. Name all line segments and identify the endpoints.



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You can use many tools to create geometric figures. Some tools, such as a ruler or a protractor, are classified as measuring tools. A **compass** is a tool used to create arcs and circles. A **straightedge** is a ruler with no numbers. It is important to know when to use each tool.

Protractor Compass Straightedge

- When you **sketch** a geometric figure, the figure is created without the use of tools.
- When you **draw** a geometric figure, the figure is created with the use of tools such as a ruler, straightedge, compass, or protractor. A drawing is more accurate than a sketch.
- When you **construct** a geometric figure, the figure is created using only a compass and a straightedge.

4. Explain the differences among sketching a geometric figure, drawing a geometric figure, and constructing a geometric figure.

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NOT IN YOUR BOOK, COPY PROBLEM INTO NOTES

5. Sketch two planes whose intersection is a line.

6. Sketch three planes whose intersection is a point.

7. Draw and label three collinear points X, Y, and Z such that point Y is between points X and Z and the distance between points X and Y is one half the distance between points Y and Z.

8. Use a symbol to represent the name of each geometric figure.

a.

b.

c.

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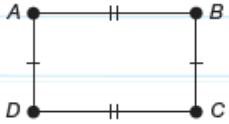
If two line segments have equal measure, then the line segments have the same length. **Congruent line segments** are two or more line segments of equal measure.

If $m\overline{AB} = m\overline{CD}$, then line segment AB is congruent to line segment CD by the definition of congruent line segments. This statement can be written using symbols as $\overline{AB} \cong \overline{CD}$ and is read as "line segment AB is congruent to line segment CD."

Use the congruence symbol, $\cong$, between references to congruent geometric figures; and the equal symbol, $=$, between references to equal lengths or distances.

Markers are used to indicate congruent segments in geometric figures. If a diagram has more than one set of congruent segments then sets of markers can be used.

The figure shows $\overline{AB} \cong \overline{CD}$ and $\overline{AD} \cong \overline{BC}$.



11. Draw and label two congruent line segments. Then, use symbols to write a statement that describes their relationship.

Homework

Finish pages - in student text

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