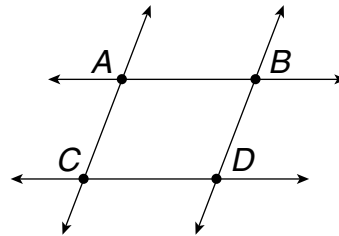


**LESSON**  
**7-1** **Practice B**  
**Points, Lines, and Planes**

Use the diagram to name each geometric figure.

1. two points \_\_\_\_\_
2. a plane \_\_\_\_\_
3. a line segment \_\_\_\_\_
4. a point shared by two lines \_\_\_\_\_
5. a line \_\_\_\_\_



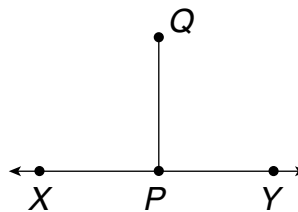
Use the diagram to give a possible name for each figure.

6. two different ways to name the line

\_\_\_\_\_

7. four different names for rays

\_\_\_\_\_



8. another name for  $\overline{QP}$

\_\_\_\_\_

9. Is the following statement always true, sometimes true, or never true? Explain your reasoning. A line is longer than a line segment.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

10. Using endpoints as your basis, explain how a line, a line segment, and a ray are different.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## CHAPTER 7 Are You Ready? Recording Sheet

### 7 Plane Geometry

Choose the best term from the list to complete each sentence.

protractor ruler triangle rectangle horizontal  
vertical clockwise counterclockwise

1. A closed figure with three sides is a triangle and a closed figure with four sides is a rectangle.

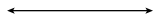
2. A protractor is used to measure and draw angles.

3.



The arrow inside the circle is moving clockwise.

4.



A line that extends left to right is horizontal.

Use an inch ruler to measure each line to the nearest  $\frac{1}{2}$  in.

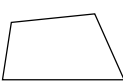
5. 2 in. 6.  $1\frac{1}{2}$  in.

Use a centimeter ruler to measure each line to the nearest tenth of a centimeter.

7. 3 cm 8. 1.5 cm

Tell how many sides and angles each figure has.

9.



4 sides, 4 angles

10.



8 sides, 8 angles

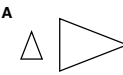
11.



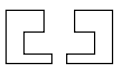
5 sides, 5 angles

Which two figures are exactly the same size and shape but are in different positions? B

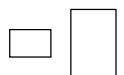
12. A



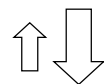
B



C



D



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## LESSON 7-1 Exploration Recording Sheet

### 7-1 Points Lines and Planes

Geometry can be used to describe the physical world around us. Check the box of the geometry term that each real-world item represents.

	Point	Line Segment	Plane
1. A freckle	<input checked="" type="checkbox"/>		
2. A strand of hair		<input checked="" type="checkbox"/>	
3. A poster			<input checked="" type="checkbox"/>
4. A pixel on your calculator screen	<input checked="" type="checkbox"/>		
5. A period at the end of a sentence	<input checked="" type="checkbox"/>		
6. A guitar string		<input checked="" type="checkbox"/>	
7. The minute hand of a clock		<input checked="" type="checkbox"/>	
8. A computer screen			<input checked="" type="checkbox"/>

### Think and Discuss

9. **Describe** the characteristics of the items that you classified as *points* in the table above.

Possible answer: The figures are very small and without length.

10. **Describe** the characteristics of the items that you classified as *line segments* in the table above.

Possible answer: The figures are long and thin and end and start at a specific place.

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## LESSON 7-2 Practice A

### 7-2 Points, Lines, and Planes

Name each geometric figure.

1.  $\bullet P$

point P, or P

2.  $\overline{AB}$

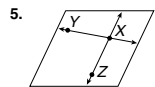
$\overline{AB}$  or  $\overline{BA}$

3.  $\overleftrightarrow{FG}$

$\overleftrightarrow{FG}$

4.  $\overleftrightarrow{LM}$

$\overleftrightarrow{LM}$  or  $\overleftrightarrow{ML}$



plane XYZ

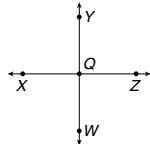
6.  $\overline{JK}$

$\overline{JK}$  or  $\overline{KJ}$

Use the diagram to choose the correct answer.

7. Which of the following does not name a line on the diagram?

A Line YQ  
B Line WZ  
C  $\overleftrightarrow{ZX}$   
D  $\overleftrightarrow{QW}$



8. Which two points cannot be used to name a ray on the diagram?

F Q and Y  
G Z and X  
H X and Y  
J W and Q

9. How many points are needed to define a line or line segment?

2 points

10. Lynn named this ray  $\overrightarrow{PQ}$ . Explain her error and give the correct name for the ray.

A ray must be named by its endpoint first.

The correct name is  $\overrightarrow{QP}$ .



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## LESSON 7-2 Practice B

### 7-2 Points, Lines, and Planes

Use the diagram to name each geometric figure. Possible answers are given.

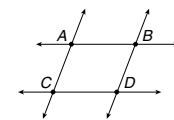
1. two points A and B

2. a plane plane ABD

3. a line segment  $\overline{BD}$

4. a point shared by two lines A

5. a line  $\overleftrightarrow{CD}$



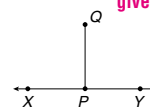
Use the diagram to give a possible name for each figure. Possible answers are given.

6. two different ways to name the line

line XY and  $\overleftrightarrow{XY}$

7. four different names for rays

ray PY, ray PX,  $\overrightarrow{PY}$ , and  $\overrightarrow{PX}$



8. another name for  $\overrightarrow{QP}$

$\overrightarrow{PQ}$

9. Is the following statement always true, sometimes true, or never true? Explain your reasoning. A line is longer than a line segment.

It is always true, because a line segment only extends between two endpoints, but a line extends without end in opposite directions.

10. Using endpoints as your basis, explain how a line, a line segment, and a ray are different.

A line has no endpoints, a ray has one endpoint, and a line segment has two endpoints.

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