

1-2: Segments

“I WILL ...

...measure and define distance.”

...apply basic facts about points, lines, and planes.”

I. Definitions

A. \_\_\_\_\_ is between any two points is the absolute value of the difference of the coordinates.

B. \_\_\_\_\_ is the number a point corresponds to on a ruler

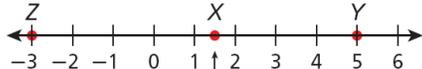
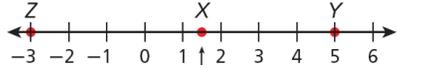
C. The \_\_\_\_\_ is the length between two points. Distance is always positive.

II. Steps in Distance

A. \_\_\_\_\_ the coordinates

B. \_\_\_\_\_ the second coordinate with the first coordinate

C. Take the \_\_\_\_\_ of the distance

<p>Ex 1: Find the distance of <math>XZ</math></p> 	<p>Your Turn: Find the distance of <math>XY</math></p> 
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III. Definitions

A. \_\_\_\_\_ says if a segment has two points and there is a third point, the first part plus the second part is equal to the entire length (Postulate 1–2–2). If  $B$  is between  $A$  and  $C$ , then  $AB + BC = AC$

B. \_\_\_\_\_ are segments that have the same length. Tick marks are used in a figure to show congruent segments. Symbol:  $\cong$

C. \_\_\_\_\_ is to cut the parts into two congruent parts

D. \_\_\_\_\_ is a point that bisects a segment

E. \_\_\_\_\_ are two rays that have a common endpoint and form a line

IV. Visual Examples

- A. \_\_\_\_\_ what is given
- B. \_\_\_\_\_ a picture and label
- C. Work it out by showing ALL steps \_\_\_\_\_
- D. Justify by showing all work

<p>Ex 2: <math>G</math> is between <math>F</math> and <math>H</math>. <math>FG = 6</math>, and <math>FH = 11</math>. Find <math>GH</math> and justify answer.</p> 	<p>Your Turn: <math>S</math> is between <math>R</math> and <math>T</math>. <math>RS = 2x + 7</math>, <math>ST = 29</math>, and <math>RT = 4x</math>. Solve for <math>x</math> and justify.</p> 	
<p>Ex 3: <math>D</math> is midpoint of <math>\overline{EF}</math>. <math>ED = 4x + 6</math> and <math>DF = 7x - 9</math>. Solve for <math>ED</math>.</p> 	<p>Ex 4: <math>B</math> is midpoint of <math>\overline{AC}</math>. <math>\overline{AB} = 2x + 1</math> and <math>\overline{BC} = 3x - 4</math>. Solve for <math>\overline{AC}</math> and justify.</p> 	<p>Your Turn: <math>A</math> is midpoint of <math>\overline{BC}</math>. <math>\overline{AB} = 6(x - 4)</math> and <math>\overline{BC} = 2x</math>. Solve for <math>\overline{AC}</math> and justify.</p> 