Geometry

Chapter 1

Section 1-3

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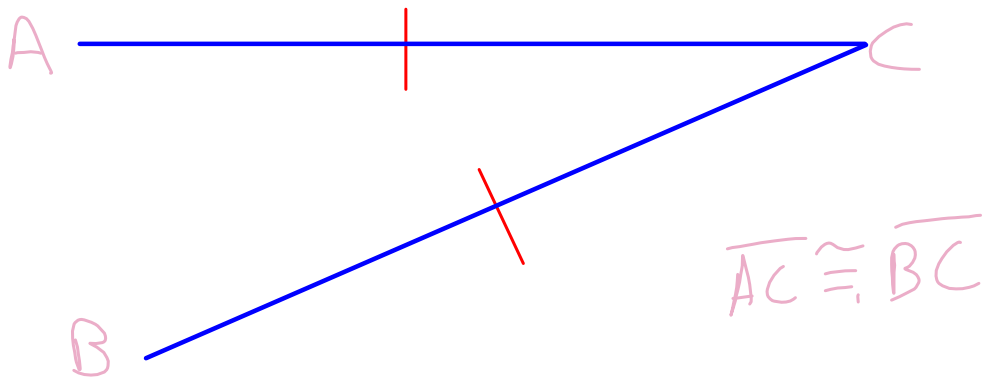
Concepts

Congruent Segments - two or more segments that have the same length (symbol: ≅)

**marked with the same number of tick marks



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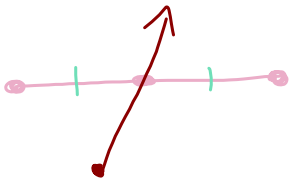
Concepts

Midpoint - point directly in the middle of a segment, divides a segment into two smaller congruent segments

Segment Bisector - Can be a point, line, ray, or another segment that intersects a segment at its midpoint



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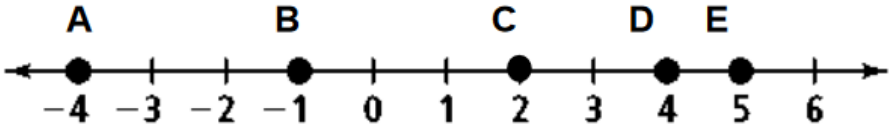
Using the Number Line



How many segments shown are congruent to $\overline{AB}$?

2

What are they?

$\overline{BC}$, $\overline{CE}$

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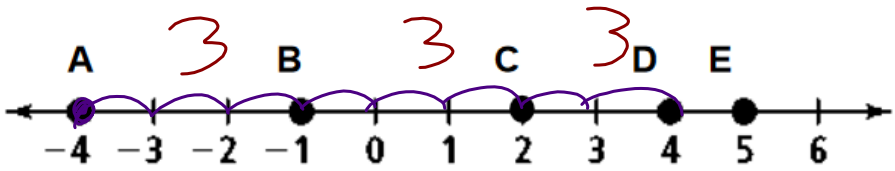
Using the Number Line



What is the length of segment $\overline{AD}$?

8 units $4-(-4)=4+4=8$

What point is $^2/_3$ of the way from A to E?

point C

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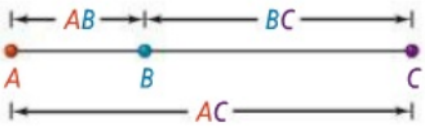
Segment Addition

take note

Postulate 1-6 Segment Addition Postulate

If three points A, B, and C are collinear and B is between A and C, then $AB + BC = AC$.



Example:

The length of AC is 11 cm. AB is 3 cm. How long is BC?

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Using Segment Addition

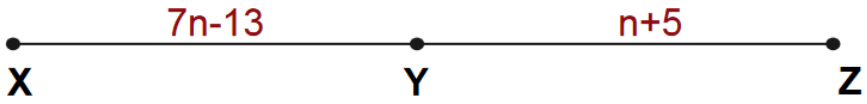

****Diagram not drawn to scale*

If the measure of $\overline{XZ}$ is 32. What is n?

$7n-13+n+5=32$

$8n-8=32$

$+8 \quad +8$

$\frac{8n}{8}=\frac{40}{8}$

$n=5$

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Using Segment Addition

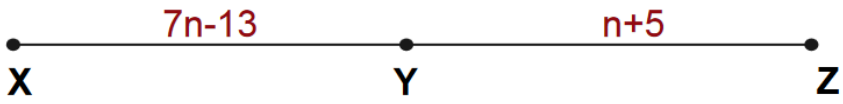

****Diagram not drawn to scale*

If Y is the midpoint of $\overline{XZ}$, what is n?

$7n-13=n+5$

$-n \quad -n$

$6n-13=5$

$+13 \quad +13$

$\frac{6n}{6}=\frac{18}{6}$

$n=3$

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Using Segment Addition

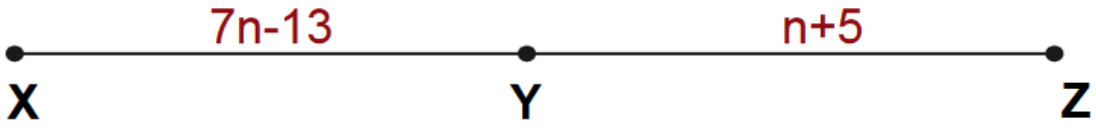

****Diagram not drawn to scale*

True or False?

If n=0, then the length of $\overline{XY}$ is -13.

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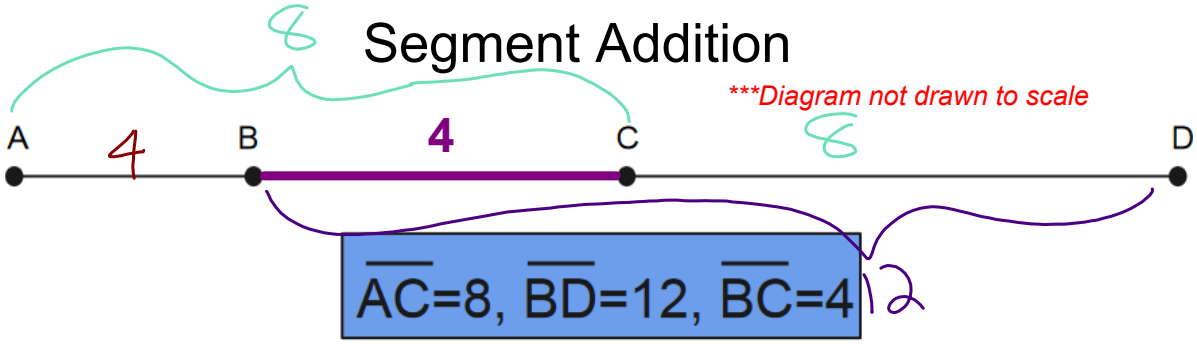
Segment Addition

****Diagram not drawn to scale*



$\overline{AC}=8$, $\overline{BD}=12$, $\overline{BC}=4$

Fill in the missing values on the number line.

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Homework

Pages 24 - 25

8 - 22 even, 36, 40

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