

Geometry Honors 1 5 Trisection and Segment Addition Postulate

Lesson 069 | Geometry | Coordinate geometry • Segments, angles and geometric basics

<https://www.youtube.com/watch?v=lpDSyQC204k>

Original practice aligned to the saved video title.

Name: _____ Date: _____ Show your reasoning.

01

$A=(-7,4)$ and $B=(29,52)$. Find midpoint, distance, and the point one-third of the way from A to B.

02

B lies between A and C. $AB=4x+8$, $BC=2x+12$, and $AC=44$. Find x and both smaller lengths.

03

$A=(-9,11)$ and $B=(21,51)$. Find midpoint, distance, and the point one-third of the way from A to B.

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04

B lies between A and C. $AB=14x+2$, $BC=5x+3$, and $AC=100$. Find x and both smaller lengths.

05

$A=(-4,4)$ and $B=(8,20)$. Find midpoint, distance, and the point one-third of the way from A to B.

06

B lies between A and C. $AB=3x+11$, $BC=7x+10$, and $AC=101$. Find x and both smaller lengths.

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01

A=(-7,4) and B=(29,52). Find midpoint, distance, and the point one-third of the way from A to B.

Midpoint (11,28); distance $\sqrt{(36)^2+(48)^2}=60$. One-third point $A+(B-A)/3 = (5,20)$.

02

B lies between A and C. $AB=4x+8$, $BC=2x+12$, and $AC=44$. Find x and both smaller lengths.

$AB+BC=AC$: $6x+20=44$. Thus $x=4$, $AB=24$, $BC=20$; their sum is AC.

03

A=(-9,11) and B=(21,51). Find midpoint, distance, and the point one-third of the way from A to B.

Midpoint (6,31); distance $\sqrt{(30)^2+(40)^2}=50$. One-third point $A+(B-A)/3 = (1,73/3)$.

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04

B lies between A and C. $AB=14x+2$, $BC=5x+3$, and $AC=100$. Find x and both smaller lengths.

$AB+BC=AC$: $19x+5=100$. Thus $x=5$, $AB=72$, $BC=28$; their sum is AC .

05

$A=(-4,4)$ and $B=(8,20)$. Find midpoint, distance, and the point one-third of the way from A to B.

Midpoint $(2,12)$; distance $\sqrt{(12)^2+(16)^2}=20$. One-third point $A+(B-A)/3 = (0,28/3)$.

06

B lies between A and C. $AB=3x+11$, $BC=7x+10$, and $AC=101$. Find x and both smaller lengths.

$AB+BC=AC$: $10x+21=101$. Thus $x=8$, $AB=35$, $BC=66$; their sum is AC .