

Summer Geometry Semester 2 Unit 1 Midpoint, Distance, Slope, Line Equation, Basic Tra...

Lesson 021 | Geometry | Coordinate geometry • Segments, angles and geometric basics

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

Original practice aligned to the saved video title.

Name: _____ Date: _____ Show your reasoning.

01

$A=(-4,13)$ and $B=(14,37)$. Find midpoint, distance, and the point one-third of the way from A to B.

02

B lies between A and C. $AB=4x+8$, $BC=7x+13$, and $AC=43$. Find x and both smaller lengths.

03

$A=(8,4)$ and $B=(50,60)$. 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. $AB=5x+7$, $BC=7x+6$, and $AC=49$. Find x and both smaller lengths.

05

$A=(8,9)$ and $B=(20,25)$. Find midpoint, distance, and the point one-third of the way from A to B.

06

B lies between A and C. $AB=10x+12$, $BC=4x+11$, and $AC=93$. Find x and both smaller lengths.

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01

A=(-4,13) and B=(14,37). Find midpoint, distance, and the point one-third of the way from A to B.

Midpoint (5,25); distance $\sqrt{(18)^2+(24)^2}=30$. One-third point $A+(B-A)/3 = (2,21)$.

02

B lies between A and C. $AB=4x+8$, $BC=7x+13$, and $AC=43$. Find x and both smaller lengths.

$AB+BC=AC$: $11x+21=43$. Thus $x=2$, $AB=16$, $BC=27$; their sum is AC.

03

A=(8,4) and B=(50,60). Find midpoint, distance, and the point one-third of the way from A to B.

Midpoint (29,32); distance $\sqrt{(42)^2+(56)^2}=70$. One-third point $A+(B-A)/3 = (22,68/3)$.

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04

B lies between A and C. $AB=5x+7$, $BC=7x+6$, and $AC=49$. Find x and both smaller lengths.

$AB+BC=AC$: $12x+13=49$. Thus $x=3$, $AB=22$, $BC=27$; their sum is AC .

05

$A=(8,9)$ and $B=(20,25)$. Find midpoint, distance, and the point one-third of the way from A to B.

Midpoint $(14,17)$; distance $\sqrt{(12)^2+(16)^2}=20$. One-third point $A+(B-A)/3 = (12,43/3)$.

06

B lies between A and C. $AB=10x+12$, $BC=4x+11$, and $AC=93$. Find x and both smaller lengths.

$AB+BC=AC$: $14x+23=93$. Thus $x=5$, $AB=62$, $BC=31$; their sum is AC .