

The Secret of Mid Point, Distance Formula and The Pythagorean Theorem Geometry Hon...

Lesson 033 | Geometry | Coordinate geometry • Segments, angles and geometric basics

<https://www.youtube.com/watch?v=n45ISmrRSV4>

Original practice aligned to the saved video title.

Name: _____ Date: _____ Show your reasoning.

01

A=(2,6) and B=(14,22). Find midpoint, distance, and the point one-third of the way from A to B.

02

B lies between A and C. $AB=13x+10$, $BC=2x+3$, and $AC=118$. Find x and both smaller lengths.

03

A=(-5,11) and B=(7,27). 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. $AB=9x+11$, $BC=2x+3$, and $AC=47$. Find x and both smaller lengths.

05

$A=(6,3)$ and $B=(18,19)$. Find midpoint, distance, and the point one-third of the way from A to B.

06

B lies between A and C. $AB=6x+13$, $BC=4x+2$, and $AC=45$. Find x and both smaller lengths.

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01

A=(2,6) and B=(14,22). Find midpoint, distance, and the point one-third of the way from A to B.

Midpoint (8,14); distance $\sqrt{(12)^2+(16)^2}=20$. One-third point $A+(B-A)/3 = (6,34/3)$.

02

B lies between A and C. $AB=13x+10$, $BC=2x+3$, and $AC=118$. Find x and both smaller lengths.

$AB+BC=AC$: $15x+13=118$. Thus $x=7$, $AB=101$, $BC=17$; their sum is AC.

03

A=(-5,11) and B=(7,27). Find midpoint, distance, and the point one-third of the way from A to B.

Midpoint (1,19); distance $\sqrt{(12)^2+(16)^2}=20$. One-third point $A+(B-A)/3 = (-1,49/3)$.

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04

B lies between A and C. $AB=9x+11$, $BC=2x+3$, and $AC=47$. Find x and both smaller lengths.

$AB+BC=AC$: $11x+14=47$. Thus $x=3$, $AB=38$, $BC=9$; their sum is AC .

05

$A=(6,3)$ and $B=(18,19)$. Find midpoint, distance, and the point one-third of the way from A to B.

Midpoint $(12,11)$; distance $\sqrt{((12)^2+(16)^2)}=20$. One-third point $A+(B-A)/3 = (10,25/3)$.

06

B lies between A and C. $AB=6x+13$, $BC=4x+2$, and $AC=45$. Find x and both smaller lengths.

$AB+BC=AC$: $10x+15=45$. Thus $x=3$, $AB=31$, $BC=14$; their sum is AC .