

Using GeoGebra Calculator for transforming graphs of 2D and 3D Models

Lesson 137 | Algebra II | Graph transformations • Three-dimensional coordinates

https://www.youtube.com/watch?v=hUB_7L3-sjY

Original practice aligned to the saved video title.

Name: _____ Date: _____ Show your reasoning.

01

Describe the transformations from $y = \sqrt{x}$ to $y = -2\sqrt{(x - (-5))} + 9$. Give domain, range, and endpoint.

02

For $A=(-1,3,10)$ and $B=(6,17,24)$, find the distance and midpoint in 3D.

03

Describe the transformations from $y = \sqrt{x}$ to $y = -3\sqrt{(x - (-2))} + 10$. Give domain, range, and endpoint.

Using GeoGebra Calculator for transforming graphs of 2D and 3D Models

Lesson 137 | Algebra II | Graph transformations • Three-dimensional coordinates

https://www.youtube.com/watch?v=hUB_7L3-sjY

Original practice aligned to the saved video title.

Name: _____ Date: _____ Show your reasoning.

04

For $A=(6,12,2)$ and $B=(12,24,14)$, find the distance and midpoint in 3D.

05

Describe the transformations from $y = \sqrt{x}$ to $y = -8\sqrt{(x - (-1))} + 6$. Give domain, range, and endpoint.

06

For $A=(7,8,5)$ and $B=(12,18,15)$, find the distance and midpoint in 3D.

Using GeoGebra Calculator for transforming graphs of 2D and 3D Models

Lesson 137 | Algebra II | Graph transformations • Three-dimensional coordinates

https://www.youtube.com/watch?v=hUB_7L3-sjY

Original practice aligned to the saved video title.

- 01** Describe the transformations from $y = \sqrt{x}$ to $y = -2\sqrt{(x - (-5))} + 9$. Give domain, range, and endpoint.

Shift horizontally by -5, stretch vertically by 2, reflect across the x-axis, and move up 9. Domain $x \geq -5$; range $y \leq 9$; endpoint $(-5, 9)$.

- 02** For $A = (-1, 3, 10)$ and $B = (6, 17, 24)$, find the distance and midpoint in 3D.

Distance $\sqrt{(49+196+196)}=21$. Average each coordinate: $(5/2, 10, 17)$.

- 03** Describe the transformations from $y = \sqrt{x}$ to $y = -3\sqrt{(x - (-2))} + 10$. Give domain, range, and endpoint.

Shift horizontally by -2, stretch vertically by 3, reflect across the x-axis, and move up 10. Domain $x \geq -2$; range $y \leq 10$; endpoint $(-2, 10)$.

Using GeoGebra Calculator for transforming graphs of 2D and 3D Models

Lesson 137 | Algebra II | Graph transformations • Three-dimensional coordinates

https://www.youtube.com/watch?v=hUB_7L3-sjY

Original practice aligned to the saved video title.

04

For $A=(6,12,2)$ and $B=(12,24,14)$, find the distance and midpoint in 3D.

Distance $\sqrt{(36+144+144)}=18$. Average each coordinate: $(9,18,8)$.

05

Describe the transformations from $y = \sqrt{x}$ to $y = -8\sqrt{(x - (-1))} + 6$. Give domain, range, and endpoint.

Shift horizontally by -1, stretch vertically by 8, reflect across the x-axis, and move up 6. Domain $x \geq -1$; range $y \leq 6$; endpoint $(-1,6)$.

06

For $A=(7,8,5)$ and $B=(12,18,15)$, find the distance and midpoint in 3D.

Distance $\sqrt{(25+100+100)}=15$. Average each coordinate: $(19/2,13,10)$.