

Summer Geometry Semester 2 Unit 3 Tranforamtion Part 1

Lesson 023 | Geometry | Geometric transformations and tessellations

<https://www.youtube.com/watch?v=LZ0rSDLjfRg>

Original practice aligned to the saved video title.

Name: _____ Date: _____ Show your reasoning.

01

For $P=(4,11)$, find its image under: reflection across $y=x$; 90° counterclockwise rotation about the origin; translation by $(-7,-8)$; dilation of scale 7 about the origin.

02

For $P=(5,11)$, find its image under: reflection across $y=x$; 90° counterclockwise rotation about the origin; translation by $(-2,-12)$; dilation of scale 2 about the origin.

03

For $P=(7,14)$, find its image under: reflection across $y=x$; 90° counterclockwise rotation about the origin; translation by $(-5,-4)$; dilation of scale 7 about the origin.

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04

For $P=(12,9)$, find its image under: reflection across $y=x$; 90° counterclockwise rotation about the origin; translation by $(4,-13)$; dilation of scale 2 about the origin.

05

For $P=(4,8)$, find its image under: reflection across $y=x$; 90° counterclockwise rotation about the origin; translation by $(-1,-3)$; dilation of scale 7 about the origin.

06

For $P=(6,12)$, find its image under: reflection across $y=x$; 90° counterclockwise rotation about the origin; translation by $(-2,-4)$; dilation of scale 2 about the origin.

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01

For $P=(4,11)$, find its image under: reflection across $y=x$; 90° counterclockwise rotation about the origin; translation by $(-7,-8)$; dilation of scale 7 about the origin.

Reflect $(x,y) \rightarrow (y,x)$: $(11,4)$. Rotate $(x,y) \rightarrow (-y,x)$: $(-11,4)$. Translate: $(-3,3)$. Dilate: $(28,77)$.

02

For $P=(5,11)$, find its image under: reflection across $y=x$; 90° counterclockwise rotation about the origin; translation by $(-2,-12)$; dilation of scale 2 about the origin.

Reflect $(x,y) \rightarrow (y,x)$: $(11,5)$. Rotate $(x,y) \rightarrow (-y,x)$: $(-11,5)$. Translate: $(3,-1)$. Dilate: $(10,22)$.

03

For $P=(7,14)$, find its image under: reflection across $y=x$; 90° counterclockwise rotation about the origin; translation by $(-5,-4)$; dilation of scale 7 about the origin.

Reflect $(x,y) \rightarrow (y,x)$: $(14,7)$. Rotate $(x,y) \rightarrow (-y,x)$: $(-14,7)$. Translate: $(2,10)$. Dilate: $(49,98)$.

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04

For $P=(12,9)$, find its image under: reflection across $y=x$; 90° counterclockwise rotation about the origin; translation by $(4,-13)$; dilation of scale 2 about the origin.

Reflect $(x,y) \rightarrow (y,x)$: $(9,12)$. Rotate $(x,y) \rightarrow (-y,x)$: $(-9,12)$. Translate: $(16,-4)$. Dilate: $(24,18)$.

05

For $P=(4,8)$, find its image under: reflection across $y=x$; 90° counterclockwise rotation about the origin; translation by $(-1,-3)$; dilation of scale 7 about the origin.

Reflect $(x,y) \rightarrow (y,x)$: $(8,4)$. Rotate $(x,y) \rightarrow (-y,x)$: $(-8,4)$. Translate: $(3,5)$. Dilate: $(28,56)$.

06

For $P=(6,12)$, find its image under: reflection across $y=x$; 90° counterclockwise rotation about the origin; translation by $(-2,-4)$; dilation of scale 2 about the origin.

Reflect $(x,y) \rightarrow (y,x)$: $(12,6)$. Rotate $(x,y) \rightarrow (-y,x)$: $(-12,6)$. Translate: $(4,8)$. Dilate: $(12,24)$.