

NAME: \_\_\_\_\_

*P.I. G.G.54: Define, investigate, justify, and apply isometries in the plane (translations)*

1. Explain how a translation affects the coordinates and size of a figure.
2. How are a translation and an image related?
3. Give an example of how an interior designer might use translations.
4. Use translations to draw a 3D image. Begin by drawing a polygon on graph paper. Translate it up and to the right. Connect each vertex with its image.

Translations right and left change the  $x$ -coordinates; translations up and down change the  $y$ -coordinates.

[1] The size is not affected.

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A translation is performed by sliding a point, line or shape into a new position without turning it or

[2] flipping it over. The new shape is its image.

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[3] Answers may vary. Sample: in creating a wallpaper border

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[4] Check students' work.

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