Transformations Activities

Transformations Notes

1) Reflection – a figure that is “flipped” across a line, creating a mirror image (like you reflection in the mirror)

2) Translation – sliding every point in the same direction, the same amount

3) Rotation – turning an object around a fixed point (like the Earth rotates around the axis – it spins!)

Here a triangle is rotated around the point marked with a "+"
Transformations Activity 1

1. Use an index card or cut out a rectangle about the same size (2 in x 3 in). Then, cut a small notch or triangle out of the rectangle, as shown at right.

2. On another piece of paper, use your notched rectangle as a template, as follows:
   - Trace the template, including the notch, on your new sheet of paper. Label this rectangle “original.”
   - Place the template back in its first position on top of the tracing, slide it slowly in any direction without turning it from its original orientation, and trace it in a second location on the sheet. Label this rectangle “translation (slide).”
   - Turn the template on one point, and trace it in a third location. Label this rectangle “rotation (turn).”
   - Flip the template over, and trace it in a fourth location. Label this rectangle “reflection (flip).”

Below is a sample of what each transformation may look like. Your model will not match exactly, and that is okay!

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original (preimage)  translation  rotation  reflection
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Extra: We’d love to see your transformations! Share on Flipgrid or e-mail us a picture. If you don’t have access to internet, please share your work with a family member and teach them about transformations.
Transformations Activity 2

Slides, Flips, or Turns

Directions: Look carefully at each figure in each row. Which figures on the right have a translation, rotation, or reflection from the original figure on the left? Circle and label them. (Note – each question does not contain examples of all 3 transformations and may use one type more than once)

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1. Identify the 3 pairs of objects that show a reflection.

2. Which pair of figures appear to be congruent?
3. Which appears to be a pair of congruent figures?

A

B

C

D

4. Which picture shows a translation of the first shape?

A

B

C

D

5. Which statement below is true?

A Rotating an object around a point is a translation.
B Moving a figure diagonally is a reflection.
C Flipping a figure over a line is a rotation.
D Turning a figure around a point is a rotation.

6. Which transformation has occurred?

A translation
B turn
C rotation
D reflection
7. Identify the transformation that is represented in each picture.

8. Which picture shows a single reflection of the figure across the line?
9. Which shape is congruent to the one shown below?

A

B

C

D

10. Which scenario below best describes a translation?

A Jacob seeing his image in the mirror.
B Sarah moving a chess piece diagonally on the chess board.
C Raquel flipping a friend egg in the pan.
D Jessa’s bicycle wheel spinning.

11. Look at the figure below. Which transformation is shown?

A rotation
B translation
C reflection
D turn
12. Look at the figures below. If this figure is transformed in the same way two more times, what will it look like?
Transformations Activity 2 - Key

Directions: Look carefully at each figure in each row. Which figures on the right have a translation, rotation, or reflection from the original figure on the left? Circle and label them.

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**Common Assessment Answer Key**

1. A, D, E  
2. D  
3. C  
4. C  
5. D  
6. A  
7. Translation, Reflection, Rotation, Rotation, Translation  
8. B  
9. C  
10. B  
11. C  
12. D