

## Sliding shapes (translation) on squared paper

### CURRICULUM ALIGNMENT

SHA.TRN.3

model and explain the effects of transformations on shapes and line segments.

SHA.SAL.3a

describe, interpret and record directional instructions and location.

**INTERACTIVES** Transformation Playground · challenge, display, explore

### WHAT THIS LESSON TEACHES

When a shape slides on squared paper, it moves to a new place but keeps facing exactly the same way. It does not turn and it does not flip, and every corner moves the same number of squares in the same direction.

- A chess piece pushed three squares across the board without being spun around.
- If one corner moves 4 squares right, all the corners move 4 squares right.

### MODEL THIS ON THE BOARD

#### SLIDE A GAME TOKEN 2 SQUARES RIGHT

- 1 Draw a small L-shaped token on the squared paper for a board game.
- 2 Mark every corner of the token carefully.
- 3 Move each corner exactly 2 squares to the right, keeping the same up-down position.
- 4 Redraw the token in the new spot. Check it still faces the same way with no turn or flip.

### DISCUSSION STARTER

**REFLECT** How can you tell a slide from a flip or a turn just by looking?

### ANSWER KEY

**Scaffold:** visual check on the page

Q1: Yes

Q2: Yes

Q3: Yes

**Spot:** A slide (translation) moves a shape without turning or flipping it. The triangle must still point the same way after moving 3 squares right.

### EXTENSION SHEET · STRETCH ANSWERS

S1: 4 squares to the left

S2: 3 squares to the right

S3: 5 squares

**S4:** No. A slide keeps a shape facing the same way, and this arrow now faces the other way.

**S5:** the same L-shape, facing the same way, 3 squares to the right and 1 square down