

Face Shape Detectives

Find the flat shapes on solid objects.

GRADE 2 • 2.MG.4.a

2.MG.4.a "Trace faces of solid figures (cubes and rectangular prisms) to create the set of plane figures related to the solid figure."

NAME _____

DATE _____

FLAT FACES, FLAT SHAPES

A cube has square faces. A rectangular prism that has no square faces has rectangle faces. Trace a flat face to see its plane shape.

WORKED EXAMPLE

A cube-shaped wooden block has a flat top face. What plane shape will you see when you trace the top face?

1. Look at the flat top face.
2. A cube has square faces.
3. The tracing is a square.

Answer: square

PRACTICE 5 problems

- 1** Tia traces every face of her cube-shaped puzzle block. Complete: ____ squares and ____ rectangles.

ANSWER _____

- 2** Ben traces every face of a rectangular-prism crayon box with no square faces. Complete: ____ squares and ____ rectangles.

ANSWER _____

- 3** Choose the set Lee gets by tracing all the faces of a cube-shaped game die: 6 squares or 6 rectangles?

ANSWER _____

- 4** A rectangular-prism book box has no square faces. Ava traces 2 faces. What shape are both tracings?

ANSWER _____

- 5** Nico has 6 square cards. Could he have made them by tracing every face of a cube-shaped toy? Write yes or no.

ANSWER _____

APPLY IT Show your work

- 1** Maya is making shape cards for her toy shelf. She traces every face of a cube-shaped storage box. How many square cards does Maya make?

WORK SPACE

ANSWER _____

- 2** Eli has a rectangular-prism snack box with no square faces. He traces every face for an art project. How many rectangle cards does he make?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

Omar traces every face of a cube-shaped toy and every face of a rectangular-prism toy box with no square faces. He sorts the cards by shape. What two groups will he have? Explain why.

PART 1 • PRACTICE

#	PROBLEM	ANSWER
1	Tia traces every face of her cube-shaped puzzle block. Complete: ___ squares and ___ rectangles.	6 squares and 0 rectangles
2	Ben traces every face of a rectangular-prism crayon box with no square faces. Complete: ___ squares and ___ rectangles.	0 squares and 6 rectangles
3	Choose the set Lee gets by tracing all the faces of a cube-shaped game die: 6 squares or 6 rectangles?	6 squares
4	A rectangular-prism book box has no square faces. Ava traces 2 faces. What shape are both tracings?	rectangles
5	Nico has 6 square cards. Could he have made them by tracing every face of a cube-shaped toy? Write yes or no.	yes

PART 2 • APPLY IT

1. **6 square cards** A cube has 6 faces. Each face traces to a square.
2. **6 rectangle cards** A rectangular prism has 6 faces. Each face traces to a rectangle.

CHALLENGE

6 squares and 6 rectangles. The cube has 6 square faces, and the rectangular prism has 6 rectangle faces.

Accept number words or digits. For rectangular-prism items, accept “rectangles” only when the object is stated to have no square faces.