Chapter 2: Shapes Around Us

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Exercise 2.1 — Let us Do — Musical Instruments and Shapes

Q1 Look at the picture and observe different musical instruments. Circle the musical instruments that are similar in shape to a drum.

SOLUTION

A drum is cylinder-shaped (round and flat on top). In the garba festival picture, the tabla and dholak are similar in shape to a drum — circle these two instruments.

Q2 Tick the musical instruments that are similar in shape to a matka.

SOLUTION

A matka is rounded and bulging like a sphere. In the festival picture, the round clay pot (matka) itself is shown. No instrument is exactly matka-shaped; the rounded dhol (barrel-drum) is the closest match — tick it.

Q3 Tick the shape similar to the shape of a shehnai.

SOLUTION

A shehnai is narrow at one end and wider at the other, like a cone. The three choices shown are: triangle/cone (▲), sphere (●), and rectangle. Tick the triangle/cone shape (▲) — it best matches the tapering shape of a shehnai.

Q4 How is the shape of harmonium different from the shape of a drum?

SOLUTION

A drum is round and flat (cylinder shape).
A harmonium is box-shaped (cuboid) — it has flat rectangular faces and sharp corners.
The drum is round with no corners, while the harmonium has corners and flat sides.
The drum is round (cylinder-shaped) with no corners; the harmonium is box-shaped (cuboid) with flat faces and corners.

Q5 Cross the odd one out from each group of shapes.

SOLUTION

Cross the odd one out in each row. Row 1 (carrot, ice-cream cone, orange, wafer cone): orange is the odd one — it is round (sphere), while the others are cone-shaped. Row 2 (sun, building, ball, globe): building/house is the odd one — it has flat faces and corners, while the others are round. Row 3 (cylinder log, flat plank, rectangular box, cheese block): the cylinder (log) is the odd one — it is round, while the others are flat rectangular (cuboid) shapes.

Exercise 2.2 — Let us Do — Match Solid Shapes

Q1 Match the musical instruments and objects with their solid shapes.

SOLUTION

Match each instrument/object to its solid shape. Drum → Cylinder (also matches pencil on the right). Harmonium → Cuboid (flat box; also matches treasure chest). Bell → Cone (also matches party cone hat). Wooden box → Cube (also matches dice). Matka/pot → Sphere (also matches gold laddoo). Shehnai → Cylinder (also matches pencil). One example match is already drawn for you — use it as a guide to draw lines for the rest.

Exercise 2.3 — Let us Do — Decorating Shapes (Faces, Edges, Corners)

Q1 Heena and Atif decorated a gift box (cuboid). The gift box has 6 faces, 12 edges and 8 corners. They used 1 star per face, 1 ribbon per edge and 1 pompom ball per corner. How many stars, ribbons and pompom balls did they use?

SOLUTION

Faces of a cuboid = 6 → stars needed = 6
Edges of a cuboid = 12 → ribbon stripes needed = 12
Corners of a cuboid = 8 → pompom balls needed = 8
6 stars, 12 ribbon stripes, 8 pompom balls.

Q2 If you also have to decorate the given shapes in the same way with stars (for faces), ribbon stripes (for edges) and pompom balls (for corners), how many of each will you need for each object shown?

SOLUTION

Decorate each shape: Small wooden box (cube) — 6 stars (faces), 12 ribbon stripes (edges), 8 pompom balls (corners). Pink cone/party hat (cone) — 1 star (face), 0 ribbon stripes (edges), 1 pompom ball (corner). Treasure chest (cuboid) — 6 stars (faces), 12 ribbon stripes (edges), 8 pompom balls (corners).

Exercise 2.4 — Let us Think — Faces, Edges and Corners Table

Q1 Look at the objects and fill the table: Object — I look like a — Faces — Edges — Corners. (Objects shown include a cube, cuboid, cone, cylinder, sphere.)

SOLUTION

Fill the table for each object shown. Dice → Cube: 6 faces, 12 edges, 8 corners. Cake/cheese slice → Cuboid: 6 faces, 12 edges, 8 corners. Carrot → Cone: 1 face, 0 edges, 1 corner. Chalk/pencil → Cylinder: 2 faces, 0 edges, 0 corners. Ball → Sphere: 1 face, 0 edges, 0 corners. Crayon box → Cuboid: 6 faces, 12 edges, 8 corners. Ice-cream cone → Cone: 1 face, 0 edges, 1 corner. Water bottle → Cylinder: 2 faces, 0 edges, 0 corners.

Exercise 2.5 — Let us Do — Name Objects by Corners

Q1 Name the objects which have One Corner.

SOLUTION

Objects with exactly one corner are cone-shaped. Examples: an ice-cream cone, a party hat, a funnel.

Examples: ice-cream cone, party hat (cone-shaped objects).

Q2 Name the objects which have No Corners.

SOLUTION

Objects with no corners are sphere or cylinder-shaped. Examples: a ball (sphere), a tin can/drum (cylinder), a globe.

Examples: ball (sphere), tin can/drum (cylinder), globe.

Q3 Name the objects which have Three Corners.

SOLUTION

Objects with three corners are not common solids at this level. The book encourages open exploration — look around the classroom for any object that has exactly three corners and write its name. (A triangular pyramid/tetrahedron has 4 corners, not 3; this question invites children to discover and discuss.)

Q4 Name the objects which have _____ Corners (fill in the blank for the group shown).

SOLUTION

The blank in '_____ Corners' is Eight. A cube or cuboid (like a box or chalk-duster) has 8 corners. Write 'Eight' in the blank and name three box-shaped objects you can see around you (e.g., chalk box, book, brick).

Q5 Project Work: Take a cardboard sheet and try to make an object with four faces. Now, try to make an object with one face.

SOLUTION

Object with four faces: A triangular pyramid (tetrahedron) has 4 triangular faces. Cut out 4 triangles from cardboard and join the edges.

Object with one face: A sphere has one curved face. You can make a rough sphere shape by rolling a ball of clay or paper.

Four-faced object: triangular pyramid (tetrahedron). One-faced object: sphere (ball).