Worksheet - 2D and 3D shapes

Year: Year 1 · 20

Show your working.

Question 1

Question 1 – Name the flat shape *(Section A · Practice)*

Write the name of each shape.

a. 

b. 

c. 

d. 

Question 2

Question 2 – Sides and corners *(Section A · Practice)*

Complete the table by writing the number of sides and corners.

Shape	Sides	Corners
Triangle	?	?
Square	?	?
Rectangle	?	?
Circle	?	?

a. How many sides does a triangle have?
b. How many corners does a square have?
c. How many sides does a circle have?
d. Which two shapes have 4 sides?

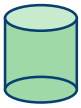
Question 3

Question 3 – Name the solid shape *(Section A · Practice)*

Write the name of each solid shape.

a. 

b. 

c. 

d. 

e. 

Question 4

Question 4 – Faces, edges and vertices *(Section A · Practice)*

Look at the cube.



a. How many faces does a cube have?
b. What shape is each face?
c. How many edges does a cube have?
d. How many vertices (corners) does a cube have?

Question 5

Question 5 – What am I? *(Section A · Practice)*

Read each clue. Write the name of the shape.

a. I am flat. I have 3 sides.
b. I am flat and round. I have no corners.
c. I am solid. I can roll and I am like a ball.
d. I am solid. I have 6 square faces.

Question 6

Question 6 – Complete the pattern *(Section A · Practice)*

Say the next shape in each pattern. Choose circle, square or triangle.

a. 

b. 

c. 

Question 7

Question 7 – Flat shapes on solid shapes *(Section A · Practice)*

Find the flat shape you would see on the face of each solid shape.

a. The face of a cube
b. The bottom of a cylinder
c. The bottom of a cone
d. The base of a pyramid

Question 8

Question 8 – Shapes at home *(Section B · Real-life practice)*

Mia is looking for shapes in her kitchen. She finds a pizza box, a tin of beans, a ball of pasta dough, a clock and a toy block.

Object	Shape
Pizza box	square (flat top)
Tin of beans	cylinder
Dough ball	sphere
Clock	circle
Toy block	cube

a. Which object is a cylinder?
b. Which object is shaped like a ball?
c. What flat shape is the clock?
d. What shape is the top of the tin of beans?

Question 9

Question 9 – Building with blocks *(Section B · Real-life practice)*

Ali builds a tower using solid shapes. He uses 2 cubes, 1 cylinder, 1 cone and 3 cuboids.



a. How many solid shapes does Ali use in all?
b. Which shape does he put on the top of the tower?
c. Which shapes would not stack well because they roll?
d. How many shapes have flat faces only?

Question 10

Question 10 – Printing with shapes *(Section B · Real-life practice)*

In art, Lola dips solid shapes in paint and presses them on paper. She uses a cube, a cylinder, a cone and a cuboid. She makes 3 prints with each shape.



a. What flat shape does the cylinder make?
b. What flat shape does the cube make?
c. How many prints does Lola make altogether?
d. She makes 2 more prints with the cone. How many prints now?

Question 11

Question 11 – The playground *(Section B · Real-life practice)*

In the playground there is a round roundabout, a square sandpit, a rectangular climbing wall and a triangle roof on the little house. The football is a sphere.

a. Which flat shape has no corners?
b. How many sides does the sandpit have?
c. What is the shape of the roof of the little house?
d. Which solid shape is the football?

Question 12

Question 12 – Sorting shapes *(Section B · Real-life practice)*

Ben has 8 shapes: 3 circles, 2 triangles, 2 squares and 1 rectangle. He sorts them into shapes with corners and shapes without corners.

Shape	How many
Circle	3
Triangle	2
Square	2
Rectangle	1

a. How many shapes have no corners?
b. How many shapes have corners?

c. How many shapes in total?
d. Ben says "More than half the shapes have corners." Is he right?

Question 13

Question 13 – Ice cream shop *(Section B · Real-life practice)*

An ice cream shop has a sign shaped like a cone. The shop has cube-shaped boxes of sprinkles. The tubs of ice cream are cylinders. The shop sells ice cream in balls (spheres).

a. What shape is the sign?
b. What shape are the boxes of sprinkles?
c. What shape is a tub?
d. The shop sells 7 scoops. How many scoops are spheres? Explain.

Question 14

Question 14 – Pyramids in Egypt *(Section B · Real-life practice)*

Yasmin looks at a photo of the pyramids in Egypt. Each pyramid has a square bottom (the base) and 4 triangle faces on the sides.



a. What shape is the base?
b. How many triangle faces does a pyramid have?
c. How many faces does a pyramid have in all?
d. How many vertices (corners)? Count the top and the base.

Question 15

Question 15 – Shape detective *(Section C · Problem solving)*

Kai is a shape detective. He has three clues for each shape.

a. "I am flat. I have 4 sides. All my sides are the same." What shape am I?
b. "I am flat. I have 4 sides. Two sides are long and two are short." What shape am I?
c. "I am solid. I have 2 flat faces and 1 curved face." What shape am I?
d. "I am solid. I have 1 flat face, 1 curved face and 1 vertex." What shape am I?

Question 16

Question 16 – A pattern problem *(Section C · Problem solving)*

Dev makes a pattern with shapes: circle, square, triangle, circle, square, triangle, and

so on. The pattern repeats every 3 shapes. He makes 12 shapes in all.

a. What is the 7th shape? (The 6th shape is a triangle.)
b. What is the 8th shape?
c. What is the 9th shape?
d. How many circles are there in the 12 shapes? Count 1 circle in every 3 shapes.

Question 17

Question 17 – Corners count *(Section C · Problem solving)*

Sam draws four shapes: a triangle, a square, a rectangle and a circle. He counts all the corners on the four shapes.

a. How many corners does the triangle have?
b. How many corners do the square and rectangle have together?
c. How many corners are there altogether on the four shapes?
d. Sam draws another triangle. How many corners are there now?

Question 18

Question 18 – Building a box *(Section C · Problem solving)*

Nina makes a box from flat shapes. She needs 6 squares to make a cube. She has 15 squares.



a. How many squares does she need for one cube?
b. How many cubes can she make with 15 squares? Count in 6s.
c. How many squares are left over?
d. How many squares does she need to make 3 cubes?

Question 19

Question 19 – Challenge: faces and corners *(Section D · Challenge)*

Zara counts the faces and vertices on solid shapes.

a. A cube has 6 faces and 8 vertices. How many faces and vertices altogether?
b. A cuboid has the same number of faces and vertices as a cube. How many faces and vertices do 2 cuboids have in all?
c. A pyramid has 5 faces and 5 vertices. Which has more vertices, a pyramid or a cube?
d. How many more?

Question 20

Question 20 – Challenge: the shape puzzle *(Section D · Challenge)*

Look at the clues. Find the number of each shape.

a. I have 3 shapes. Two are the same and one is different. Between them they have 10 corners in all. They are squares and triangles. How many squares?
b. Use your answer to (a). How many triangles?
c. Check: how many corners do your squares and triangles have together?
d. Is there another answer with 3 shapes and 10 corners from squares and triangles only?