

GEOMETRY & PLANE SHAPES

1. Practice Zone 11A

A. Identify the points, lines, line segments, rays and name them.

1. A line starting at point P and extending endlessly through point Q (with an arrow at Q).

Answer: Ray PQ (or $\rightarrow PQ$)

2. A line extending endlessly in both directions through points C and D (arrows at both ends).

Answer: Line CD (or $\leftrightarrow CD$)

3. A single point labeled X.

Answer: Point X

4. A straight line connecting point M to point N with fixed endpoints.

Answer: Line segment MN (or $\overline{MN}$)

B. Count and write how many.

1. Points (dots arranged in a circle)

Answer: 7 points

2. Lines (lines crossing with arrows at both ends)

Answer: 2 lines

3. Line segments (separate straight horizontal bars)

Answer: 4 line segments

4. Rays (arrows pointing outward from a single point)

Answer: 5 rays

5. Line segments (straight segments forming a zigzag line)

Answer: 6 line segments

C. Fill in the blanks.

1. A line has ____ end points.

Answer: no

2. A point has no ____, ____ or ____.

Answer: length, breadth or thickness (or size / dimension)

3. A ray has ____ end point.

Answer: one (1)

4. ____ and ____ are parts of a line.

Answer: Rays and Line segments

5. ____ and ____ are endless and cannot be measured.

Answer: Lines and Rays

6. ____ have only length.

Answer: Line segments

2. Practice Zone 11C

A. Name the parts.

1. Square (ABCD)

Answer: 4 sides (AB, BC, CD, DA), 4 corners (A, B, C, D)

2. Circle (with center O and point P on boundary)

Answer: Centre is O, Radius = 2 cm

3. Triangle (PQR)

Answer: 3 sides (PQ, QR, RP), 3 corners (P, Q, R)

4. Rectangle (EFGH)

Answer: 4 sides (EF, FG, GH, HE), 4 corners (E, F, G, H), Equal sides: EF & GH, EH & FG

B. Name the plane shapes that you see in this figure. How many of each are there?

1. Rectangles

Answer: 3 (Names: ABDC, AEFD, EBCF)

2. Circle

Answer: 1 (Circle with centre O)

3. Triangles

Answer: 6 (Names: AED, BEC, DEF, CEF, DEC, AEB)

3. Revision Zone

A. Name the line, line segment and ray.

1. Line with points P and Q (arrows at both ends)

Answer: Line PQ (or $\leftrightarrow$ PQ)

2. Ray starting at B and passing through A

Answer: Ray AB (or $\rightarrow$ AB)

3. Curved path between points E and F

Answer: Curved line EF

B. Name the shapes and their given parts.

1. Square ABCD

Answer: Shape: Square | Sides: AB, BC, CD, DA | Vertices: A, B, C, D

2. Rectangle PQRS

Answer: Shape: Rectangle | Sides: PQ, QR, RS, SP | Vertices: P, Q, R, S

C. Measure and write the length.

1. Line segment EF

Answer: 3 cm (approx. — measure with a ruler on textbook page)

2. Line segment PQ

Answer: 4 cm (approx. — measure with a ruler on textbook page)

D. Mark the vertices as red dots.

1. Cone

Answer: 1 vertex (at the top apex point)

2. Cuboid

Answer: 8 vertices (at all 8 corners)

3. Cube

Answer: 8 vertices (at all 8 corners)

E. Colour the curved surfaces yellow and flat surfaces pink.

1. Cylinder

Answer: Curved surface (middle tube) = Yellow | Flat surfaces (2 circular ends) = Pink

2. Cuboid

Answer: All 6 flat faces = Pink (0 curved surfaces)

3. Sphere

Answer: Entire curved surface = Yellow (0 flat surfaces)

4. Case Study — The School Playground

Sam and Maya are planning a new school playground. They drew a map using different shapes:

1. The Sandpit: Has 4 equal sides and 4 corners.
2. The Football Ground: Has 4 sides (opposite sides are equal) and 4 corners.
3. The Slide Zone: Has 3 sides and 3 corners.
4. The Wheel Zone: A round shape with no corners and a centre point O.

Questions

Q1a. Name the shape used for the Sandpit.

Answer: Square

Q1b. Name the shape used for the Football Ground.

Answer: Rectangle

Q1c. Name the shape used for the Slide Zone.

Answer: Triangle

Q1d. Name the shape used for the Wheel Zone.

Answer: Circle

Q2a. A straight path with a start and end point is a line segment. How many end points does it have?

Answer: 2

Q2b. A basketball looks like a sphere. How many flat faces and curved surfaces does it have?

Answer: 0 flat face and 1 curved surface

5. Summary of Geometric Concepts

Geometric Shape	No. of Sides / Faces	Corners / Vertices	End Points / Key Property
Point	0	0	Exact position in space
Line	0	0	No end points (extends endlessly)
Ray	0	0	1 end point
Line Segment	1	2	2 end points (fixed length)
Square	4 (equal)	4	4 equal straight sides
Rectangle	4 (opposite equal)	4	Opposite sides equal
Triangle	3	3	3 straight sides
Circle	0	0	1 centre, fixed radius
Cube	6 flat faces	8	12 equal edges
Cuboid	6 flat faces	8	12 straight edges
Cylinder	2 flat, 1 curved	0	2 circular ends

Cone	1 flat, 1 curved	1 (apex)	1 circular base
Sphere	1 curved face	0	No flat faces or corners