

General lesson suggestions

While children may be familiar with the idea of objects being taken away, this is their first introduction to formal subtraction. Introduce this topic with examples that would be familiar to children, for example children leaving a table, sweets being eaten, crayons lost, etc. After demonstrating a few examples, begin to record the mathematical facts. Start by using the term 'take away'. For example 6 take away 2 = 4. As the children gain confidence, introduce the word 'minus' and the minus symbol.

Subtraction basketball:

Play a game of basketball where each team starts off with a score of 20 points. Every time a team scores, points are deducted from the total. The aim is to have the lowest score. The teacher can decide that each basket is worth 2, 3, 4, or 5 points.

Alternatively, throw a small ball into a box on the floor.

Deck of cards:

The teacher distributes a deck of cards that already has the court cards removed. Tell children that the ace = 1. Place the bundle of cards face down in the centre of the table. A child picks up 2 cards and subtracts the lower number from the higher number. If the child gets the answer correct, s/he keeps the 2 cards. If s/he gets the answer wrong, the child must place the 2 cards back under the bundle of cards. (It might be necessary to have some counters to check answers.) The game continues until all the cards are used up. The child with the most cards is the winner.

Counting backward on 100 square:

This can be done on 0–20 number lines or on the 100 square. Demonstrate a simple subtraction equation using concrete materials such as $10 - 4 = \underline{\quad}$. Ask children to use beads to find the answer. Now check the answer by doing the same sum on the number line. Demonstrate how to move one step at a time. (Many children will get the answer 5 because they start on 9 instead of 10 so it is important to do a few sums with manipulatives first and then check the answers on the 100 square or number line.)

Lesson suggestions

Before attempting page 91, worksheets may be needed using 'take away' instead of minus sign (see resources). Explain that instead of using counters, the objects can also be crossed off and count the ones that are left. Also the sums are written both horizontally and vertically. Not all children may be ready to deal with subtraction in both directions, so teacher discretion is required.

Page 91:

- The teacher asks the children the following questions to demonstrate subtraction equations:
 - This morning I had 6 pencils (line up 6 pencils). I lent 2 of them to my friends (remove 2 pencils). How many do I have left?
 - John had 8 pencils (line up 8 pencils). He lent 3 of them to his friends (remove 3 pencils). How many does he have left?
- The teacher gives each of the children 10 counters, buttons or pegs and asks them to use the counters to help them solve subtraction sums. The teacher should demonstrate how to count

- (c) Discuss the children's sorting. Look at the similarities of all the items in each hoop.
- (d) The children have to work together to sort the objects using the shapes template.

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1. Feely bag: Get a bag and a blindfold. Choose a child, and then put on the blindfold. Place the 3D shapes inside the bag. The child then has to put their hand into the bag and describe a shape based on its characteristics.
2. Classroom shapes hunt. Children work in either pairs or small groups to find 3D shapes around the room. Children can record the shapes they find using the template. (This activity can involve regular items around the room or objects specifically placed before the activity.)

Page 123, What am I?

1. (a) Use a hat and the 3D shapes labels. Use a safety pin to pin the labels onto the hat.
- (b) A child wears the hat but cannot see the name of the shape. S/he then has to question his/her classmates based on the characteristics, e.g. 'How many faces has it?' (6) 'Is it a cuboid?'

Page 124, Nets:

1. (a) Prepare the net templates for the children. Use light card if possible.
- (b) Distribute the template and scissors to the children.
- (c) Ask the children to cut out the template carefully. Ensure they cut along the outer lines of the shape only.
- (d) Allow the children to use the template to remake the shape.
- (e) Discuss the 2D shapes they see on their template.



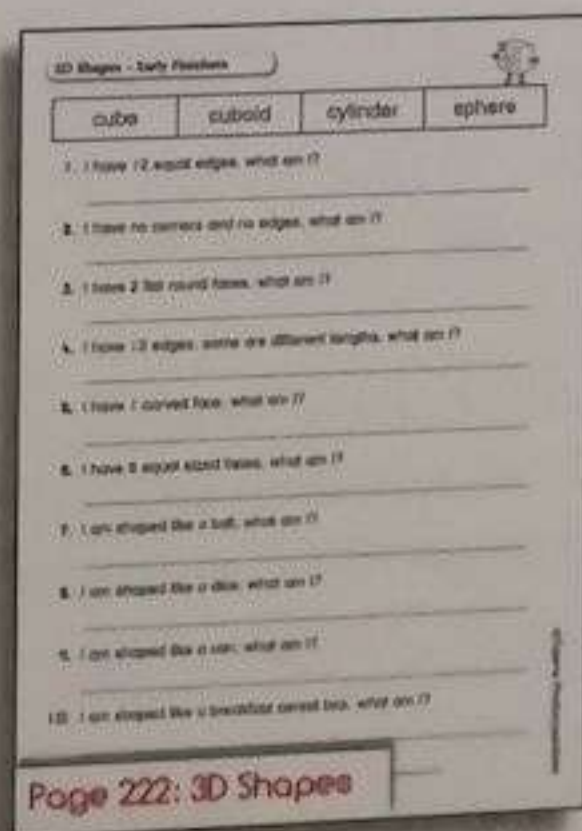
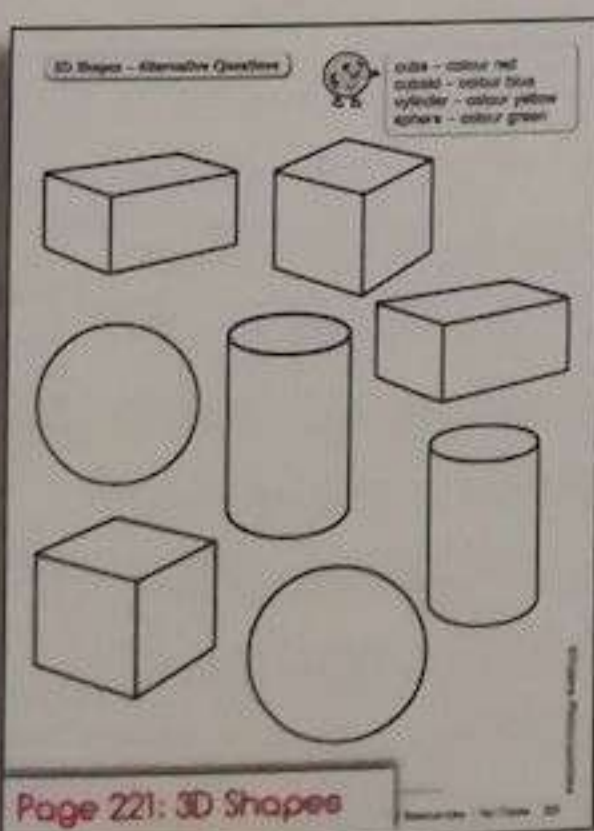
Differentiation

Lower attainers:

See separate activity sheet.

Higher attainers:

See separate activity sheet.



Vocabulary

3D shape, cube, cuboid, sphere, cylinder, face, corners, sides, edges, characteristics, length, equal, net



General lesson suggestions

3D shapes book:

Children can create small booklets by folding A4 sheets in half and stapling them together. The booklet can include information on each of the 3D shapes: cube, cuboid, sphere and cylinder. For example, a picture of the shape, examples of the shape in the environment, details of how many faces, edges and corners, etc.

Shapes walk:

Children can go on a shapes walk around the school. This can be conducted in small groups or as a whole-class activity. Children can record their findings in a variety of ways, e.g. by drawing pictures, taking photographs, making a slideshow of pictures, writing about the shapes, etc.

Shapes posters:

Children can take photographs of 3D shapes in the school environment while on a shapes walk. These photographs can then be used to make a shapes poster. Alternatively, children could draw the shapes.

Shapes run:

Place cones around the room. Stick a picture of a 3D shapes on each cone. Call out a shape and children have to run to a cone that has a picture of that shape. Progress to calling out shape characteristics, e.g. it can roll. In this case, children can run to either the cylinder or the sphere.

Making shapes:

Children can make 3D shapes using plasticine, play dough or márla.

Activity A

Answer the following questions:

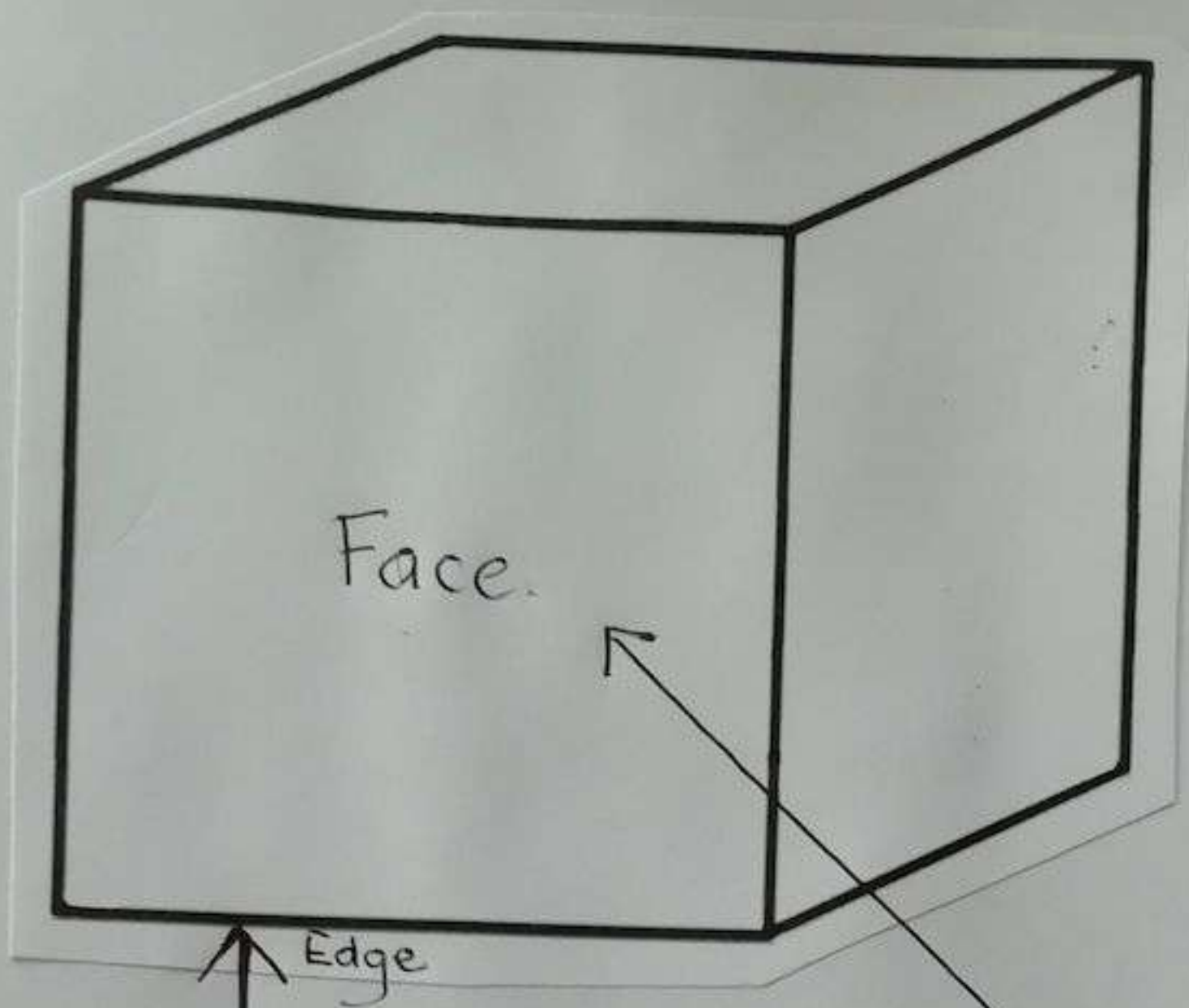
1. Put the number 1 in the box under the cube.
2. Put the number 2 in the box under the sphere.
3. Put the number 3 in the box under the cuboid.
4. Put the number 4 in the box under the cylinder.

Lesson suggestions

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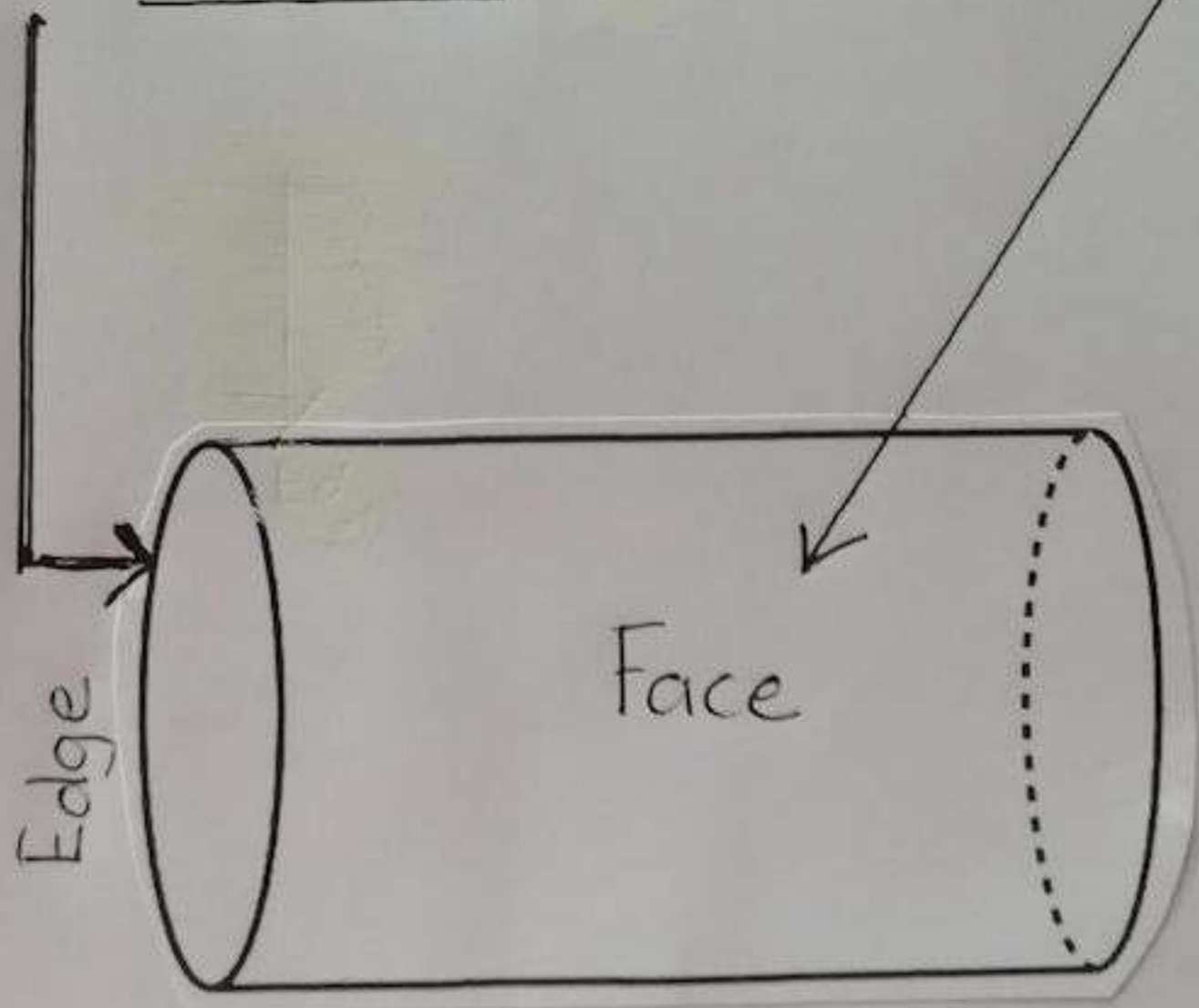
1. (a) Place 4 hoops on the floor with a label in each – cube, cuboid, sphere and cylinder.
(b) Give each child in the class a chance to pick an object from a bag of 3D shapes and place it into the correct hoop.

IMPORTANT.



Edges are sides.
They can be straight
or curved.

Faces are
surfaces. They
can be flat
or curved.



Subtraction 5 – Alternative Questions

1. (a) $78 - 32$ (b) $68 - 32$ (c) $84 - 64$ (d) $95 - 13$ (e) $38 - 28$ (f) $46 - 30$

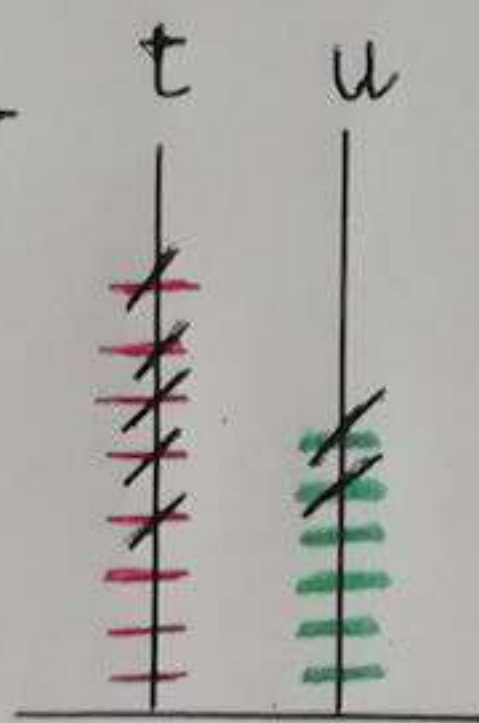
2. (a) $56 - 43$ (b) $45 - 31$ (c) $99 - 52$ (d) $32 - 22$ (e) $77 - 42$ (f) $62 - 31$

3. (a) $98 - 66$ (b) $50 - 30$ (c) $67 - 14$ (d) $49 - 21$ (e) $87 - 56$ (f) $73 - 42$

4. (a) $35 - 13$ (b) $94 - 51$ (c) $58 - 25$ (d) $79 - 46$ (e) $65 - 55$ (f) $47 - 31$

Example

$$\begin{array}{r} 86 \\ - 52 \\ \hline 34 \end{array}$$

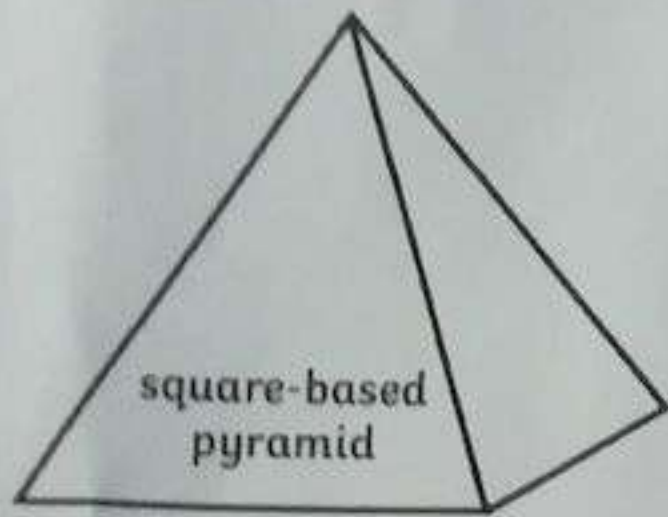


Always start at the units side and at the top e.g. $6 - 2$ then the tens e.g. $8 - 5$

Name: _____

Date: _____

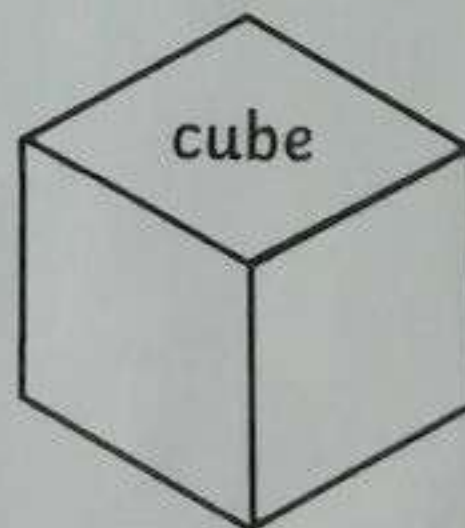
3D Shapes



edges _____

faces/surfaces _____

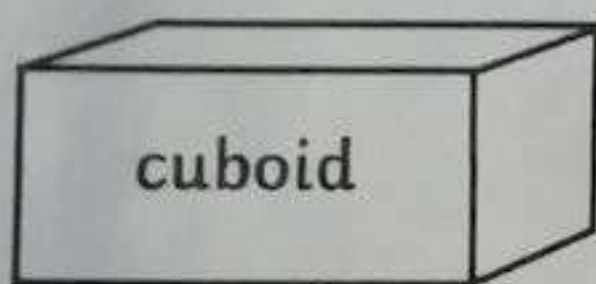
corners _____



edges _____

faces/surfaces _____

corners _____



edges _____

faces/surfaces _____

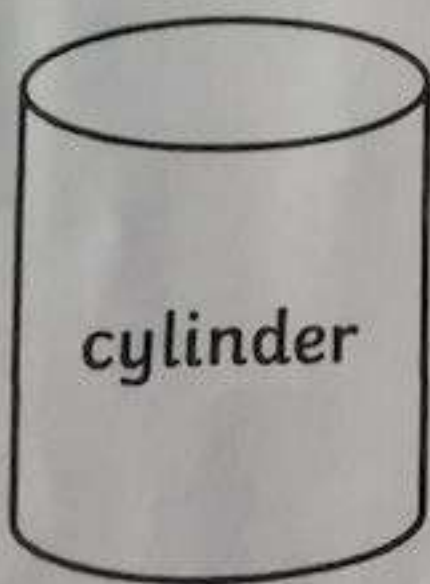
corners _____



edges _____

faces/surfaces _____

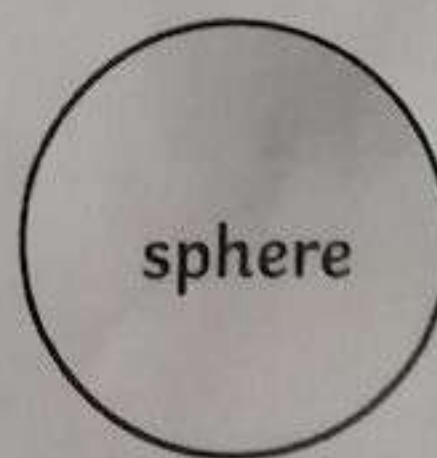
corners _____



edges _____

faces/surfaces _____

corners _____



edges _____

faces/surfaces _____

corners _____