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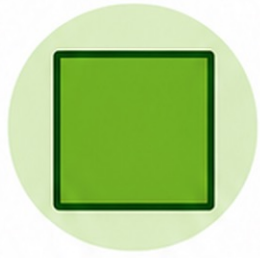
3D Objects Year 2

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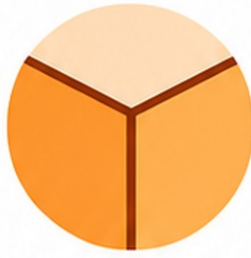
3D Object Features

We can describe 3D objects by their faces, edges and vertices.



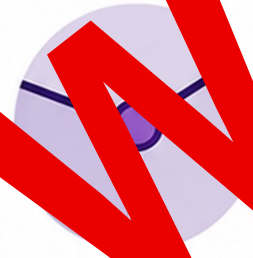
FACES

flat or curved surfaces



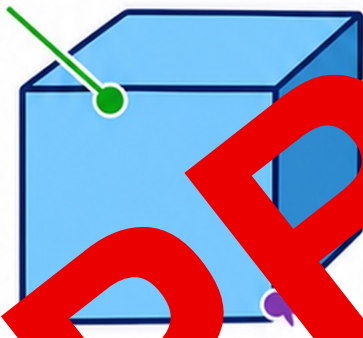
EDGES

where two faces meet

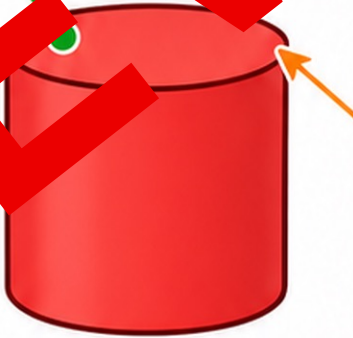


VERTICES

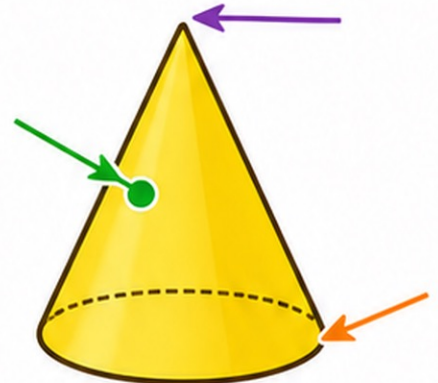
corners or points



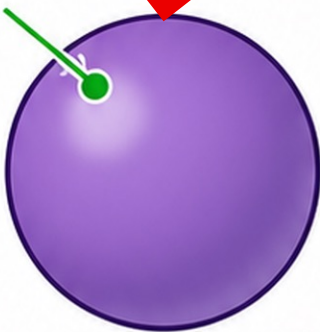
Cube



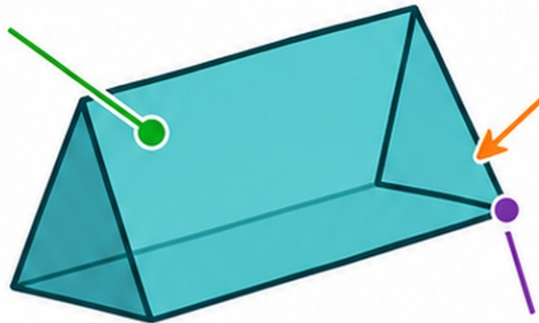
Cylinder



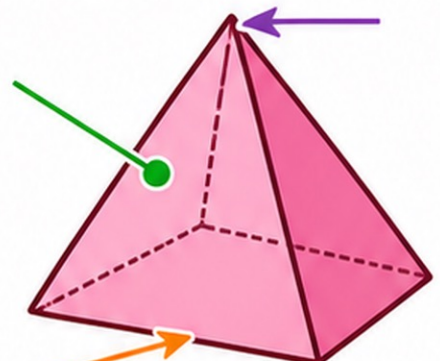
Cone



Sphere



Triangular Prism



Square-based Pyramid

2D or 3D Sort



2D

or

3D

Sort



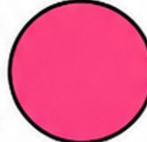
Cut out the cards. Sort each one into the correct group.

2D Shapes

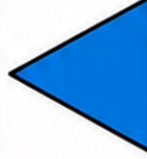
3D Objects



square



circle



triangle



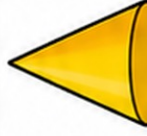
rectangle



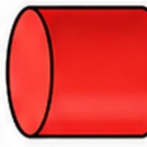
sphere



cube



cone



cylinder



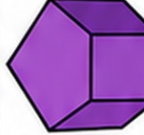
triangular prism



rectangular prism



square-based pyramid



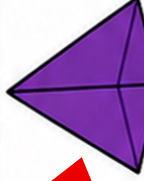
pentagonal prism



oval



hexagon



triangular-based pyramid



octagon



1



cube

2



sphere

3



cone

4



cylinder

5



rectangular
prism

6



triangular
prism



21

square-based
pyramid



20

triangular
prism



19

edges



24

flat
face



23

cone



22

pentagonal
prism

Space Object

Remove the object or
Name the object and
say one feature.



18

curved
surface



17



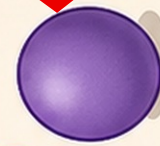
hexagonal
prism

16



cube

15



sphere

14



cylinder

13



rectangular
prism

10



pentagonal
prism

9



triangular-based
pyramid

8



faces

7



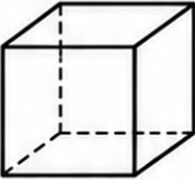
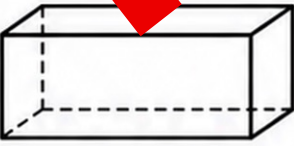
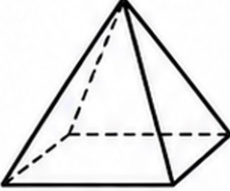
square-based
pyramid

Name: _____

Date: _____

Count the Features

Count the faces, edges and vertices for each 3D object.

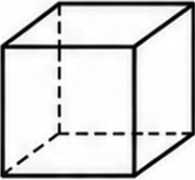
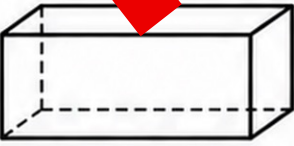
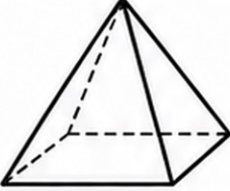
3D object	faces	edges	vertices
 cube	_____	_____	_____
 cylinder	_____	_____	_____
 cone	_____	_____	_____
 sphere	_____	_____	_____
 rectangular prism	_____	_____	_____
 square-based pyramid	_____	_____	_____

Name: ANSWERS

Date: _____

Count the Features

Count the faces, edges and vertices for each 3D object.

3D object	faces	edges	vertices
 cube	<u>6</u>	<u>12</u>	<u>8</u>
 cylinder	<u>3</u>	<u>2</u>	<u>0</u>
 cone	<u>2</u>	<u>1</u>	<u>1</u>
 sphere	<u>1</u>	<u>0</u>	<u>0</u>
 rectangular prism	<u>6</u>	<u>12</u>	<u>8</u>
 square-based pyramid	<u>5</u>	<u>8</u>	<u>5</u>

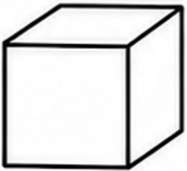
Name: _____

Date: _____

Match the Object Clues

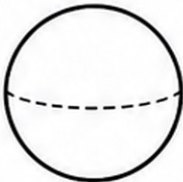
Write the matching object letter for each clue.

A



cube

B



sphere

C



cylinder

D



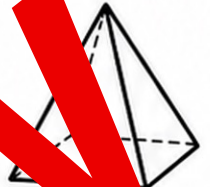
cone

E



triangular
prism

F



square-based
pyramid

1. I have no edges
and one curved surface.

Letter: _____

2. I have 6 square faces.

Letter: _____

3. I have two
circular faces
and one curved surface.

Letter: _____

4. I have one vertex
and one circular face.

Letter: _____

5. I have two
triangular faces and
three rectangular faces.

Letter: _____

6. I have one square base
and four triangular faces.

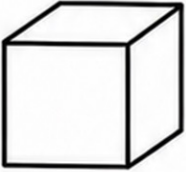
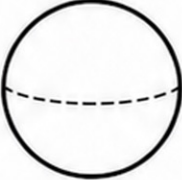
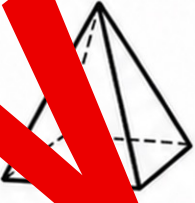
Letter: _____

Name: ANSWERS

Date: _____

Match the Object Clues

Write the matching object letter for each clue.

A	B	C	D	E	F
					
cube	sphere	cylinder	cone	triangular prism	square-based pyramid

1. I have no edges
and one curved surface.

Letter: B

2. I have 6 square faces.

Letter: A

3. I have two
flat circular faces
and one curved surface.

Letter: C

4. I have one vertex
and one circular face.

Letter: D

5. I have two
triangular faces and
three rectangular faces.

Letter: E

6. I have one square base
and four triangular faces.

Letter: F

Name: _____

Date: _____

Complete the Object Table

Look at each 3D object. Complete the table.

Word bank

yes

no

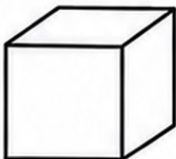
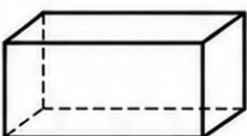
circle

square

rectangle

triangle

none

3D object	curved surface?	vertices?	flat face shapes
 cube	_____	_____	_____
 cylinder	_____	_____	_____
 cone	_____	_____	_____
 sphere	_____	_____	_____
 triangular prism	_____	_____	_____
 rectangular prism	_____	_____	_____

Complete the Object Table

Look at each 3D object. Complete the table.

Word bank

yes

no

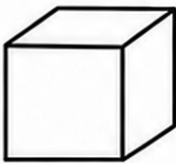
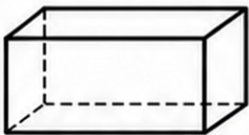
circle

square

rectangle

triangle

none

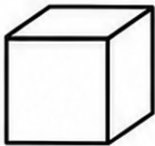
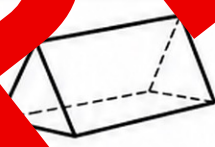
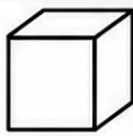
3D object	curved surface?	vertices?	flat face shapes
 cube	<u>no</u>	<u>yes</u>	<u>square</u>
 cylinder	<u>yes</u>	<u>no</u>	<u>circle</u>
 cone	<u>yes</u>	<u>yes</u>	<u>circle</u>
 sphere	<u>yes</u>	<u>no</u>	<u>none</u>
 triangular prism	<u>no</u>	<u>yes</u>	<u>triangle, rectangle</u>
 rectangular prism	<u>no</u>	<u>yes</u>	<u>rectangle</u>

Name: _____

Date: _____

Object Feature Facts

Circle True or False for each 3D object fact.

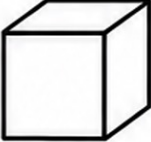
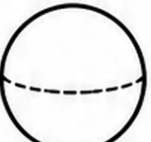
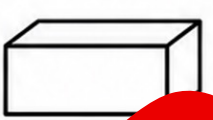
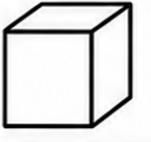
1.		A cube has 6 faces.	☐ True	☐ False
2.		A sphere has edges.	☐ True	☐ False
3.		A cylinder has a curved surface.	☐ True	☐ False
4.		A cone has one vertex.	☐ True	☐ False
5.		A rectangular prism has two triangular faces.	☐ True	☐ False
6.		A square-based pyramid has a square base.	☐ True	☐ False
7.		A triangular prism has two triangular faces.	☐ True	☐ False
8.		A cube has 8 vertices.	☐ True	☐ False
9.		A cylinder has 4 vertices.	☐ True	☐ False
10.		A cone has one circular face.	☐ True	☐ False

Name: **ANSWERS**

Date: _____

Object Feature Facts

Circle True or False for each 3D object fact.

1.		A cube has 6 faces.	☒ True	☐ False
2.		A sphere has edges.	☐ True	☒ False
3.		A cylinder has a curved surface.	☒ True	☐ False
4.		A cone has one vertex.	☒ True	☐ False
5.		A rectangular prism has 5 triangular faces.	☐ True	☒ False
6.		A square-based pyramid has a square base.	☒ True	☐ False
7.		A triangular prism has two triangular faces.	☒ True	☐ False
8.		A cube has 8 vertices.	☒ True	☐ False
9.		A cylinder has 4 vertices.	☐ True	☒ False
10.		A cone has one circular face.	☒ True	☐ False

Name: _____

Date: _____

3D Object Riddles

Read each clue. Write the 3D object name.

Word bank

cube

sphere

cone

cylinder

rectangular prism

triangular prism

square-based pyramid

triangular-based pyramid

1. I have 6 equal square faces.

Object: _____

2. I have 5 vertices and one curved surface.

Object: _____

3. I have two circular faces and one curved surface.

Object: _____

4. I have one circular face and one vertex.

Object: _____

5. I have 6 rectangular faces.

Object: _____

6. I have two triangular faces and three rectangular faces.

Object: _____

7. I have one square face and four triangular faces.

Object: _____

8. I have four triangular faces and an apex.

Object: _____

Name: **ANSWERS**

Date: _____

3D Object Riddles

Read each clue. Write the 3D object name.

Word bank

cube

sphere

cone

cylinder

rectangular prism

triangular prism

square-based pyramid

triangular-based pyramid

1. I have 6 equal square faces.

Object: cube

2. I have no vertices and one curved surface.

Object: sphere

3. I have two circular faces and one curved surface.

Object: cylinder

4. I have one circular face and one vertex.

Object: cone

5. I have 6 rectangular faces.

Object: rectangular prism

6. I have two triangular faces and three rectangular faces.

Object: triangular prism

7. I have one square face and four triangular faces.

Object: square-based pyramid

8. I have four triangular faces and an apex.

Object: triangular-based pyramid

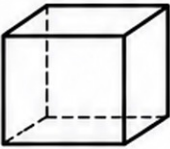
Name: _____

Date: _____

3D Object Check-Up

Show what you know about 3D objects.

A. Count the features

object	faces	edges	vertices
 cube	_____	_____	_____
 cone	_____	_____	_____
 cylinder	_____	_____	_____
 triangular prism	_____	_____	_____

B. Match the clue

No faces and one curved surface: _____

One circular face and one vertex: _____

3. Two triangular faces: _____

4. Six equal square faces: _____

C. True or False

1. A sphere has vertices.

True

False

2. A square-based pyramid has a square base.

True

False

3. A cylinder has a curved surface.

True

False

4. A cube has 12 edges.

True

False

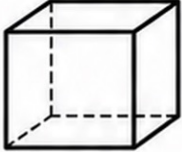
Name: ANSWERS

Date: _____

3D Object Check-Up

Show what you know about 3D objects.

A. Count the features

object	faces	edges	vertices
 cube	<u>6</u>	<u>12</u>	<u>8</u>
 cone	<u>2</u>	<u>1</u>	<u>1</u>
 cylinder	<u>3</u>	<u>2</u>	<u>0</u>
 triangular prism	<u>5</u>	<u>9</u>	<u>6</u>

B. Match the clue

1. Edges and one curved surface: sphere
2. One circular face and one vertex: cone
3. Two triangular faces: triangular prism
4. Six equal square faces: cube

C. True or False

1. A sphere has vertices.
2. A square-based pyramid has a square base.
3. A cylinder has a curved surface.
4. A cube has 12 edges.

True

False

True

False

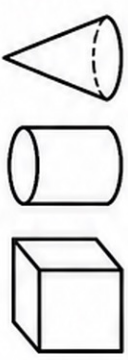
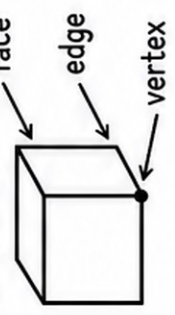
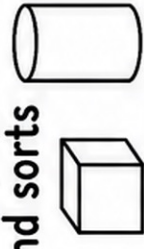
True

False

True

False

PROOFED 3D Objects Year 2 Rubric

Criteria	BEGINNING	DEVELOPING	ACHIEVING	CONFIDENT	EXCEEDING
1. Names 3D objects 	names few objects	names some common objects	names common objects correctly	names objects and uses examples	names and explains less familiar objects
2. Describes features 	needs help to count features	counts some faces, edges or vertices	counts faces, edges and vertices correctly	describes flat and curved features	explains features clearly and accurately
3. Compares and sorts 	sorts with support	sorts by one visible feature	sorts objects correctly	compares objects using feature words	justifies sorting with precise properties
4. Uses maths vocabulary 	uses everyday words	uses some feature words	uses faces, edges and vertices	uses maths vocabulary with explanations	uses precise vocabulary independently

PROOFED 3D Objects Year 2

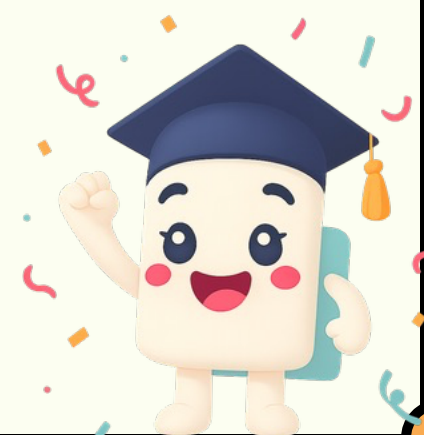
PREVIEW



Learning Goal

We can describe 3D objects using faces, edges and vertices.

PREVIEW



What Is a 3D Object?

A 3D object has length, width and depth. It is solid, not flat.



Feature Words

Faces are surfaces. Edges are where faces meet. Vertices are corners or points.



Faces

A face can be flat or curved. A cube has flat square faces.

PREVIEW



Edges

An edge is a line where two faces meet. Some curved objects have curved edges.



Vertices

Vertices are corners or points. A cone has one vertex, called an apex.



Objects With Curved Surfaces

Spheres, cylinders and cones have curved surfaces.



Cubes and Rectangular Prisms

Both have 6 faces, 12 edges and 8 vertices.



Prisms

A prism has two matching end faces joined by other faces.

PREVIEW



Pyramids

A pyramid has a base and triangular faces that meet at an apex.



Sort and Compare

Objects can be sorted by flat faces, curved surfaces, edges or vertices.

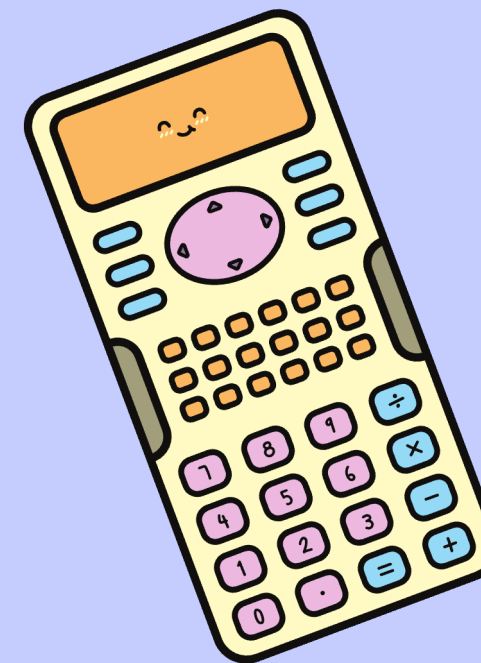
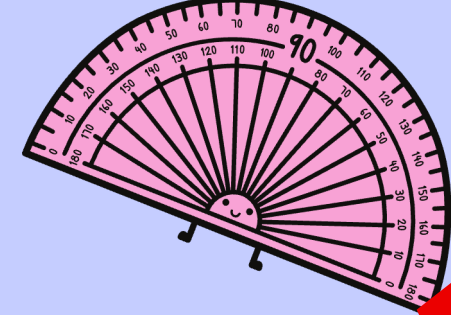
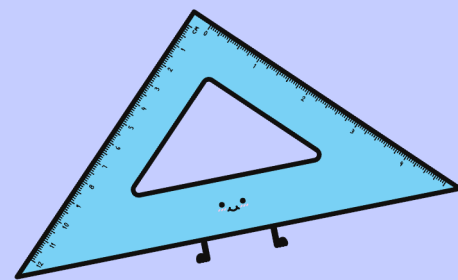
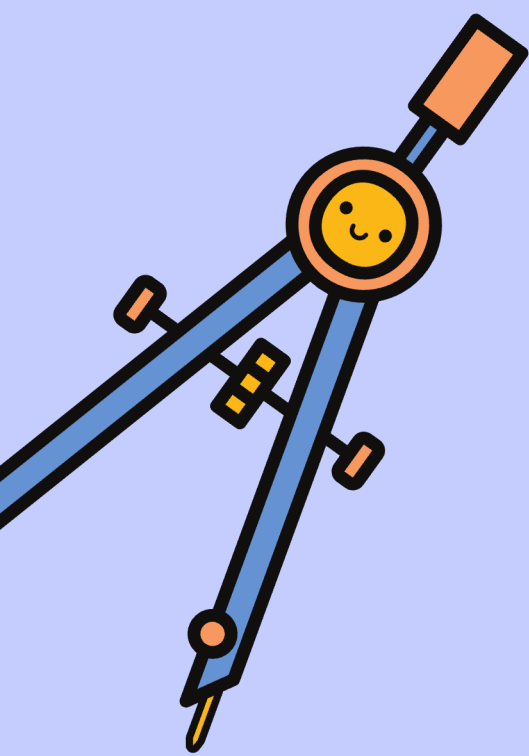


Review

Name the object, count its features, then explain how you know.

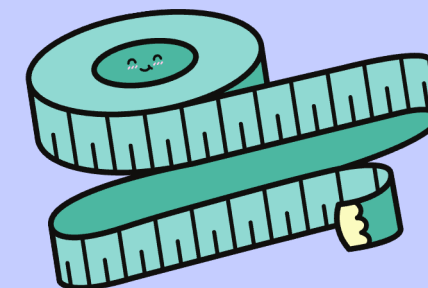
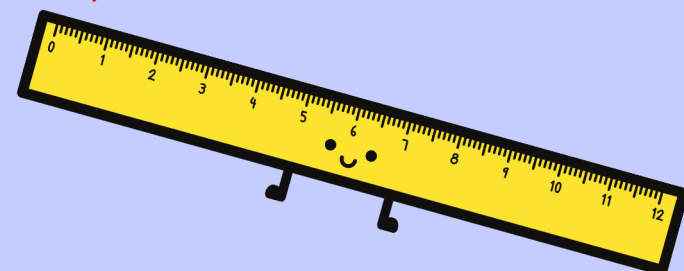
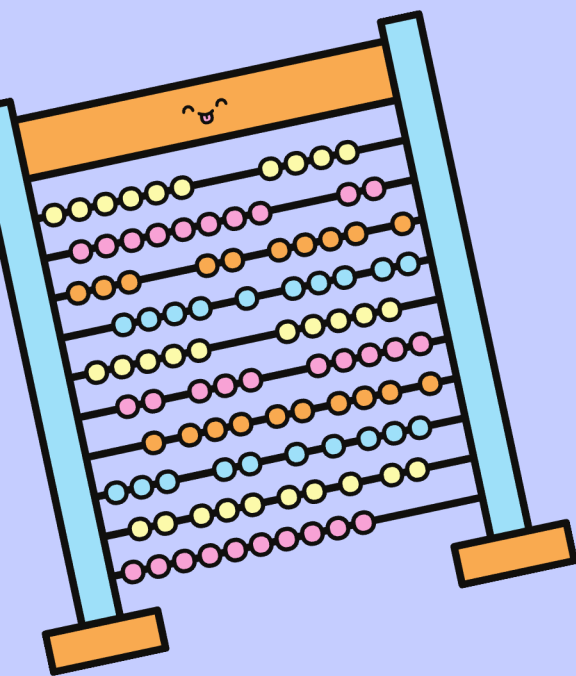
PREVIEW





Great Work!

PREVIEW



PROOFED 3D Subjects Quiz

PREVIEW



Question 1

Question 1

Which object has 6 faces, 12 edges and 8 vertices?

- A. cube
- B. sphere
- C. cone
- D. cylinder

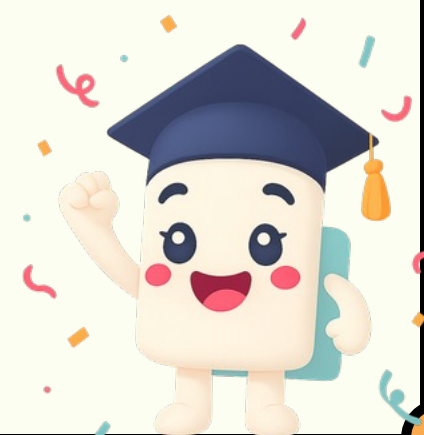


Answer 1

PREVIEW

Answer 1

A cube



Question 2

Question 2
True or false. A sphere has vertices.

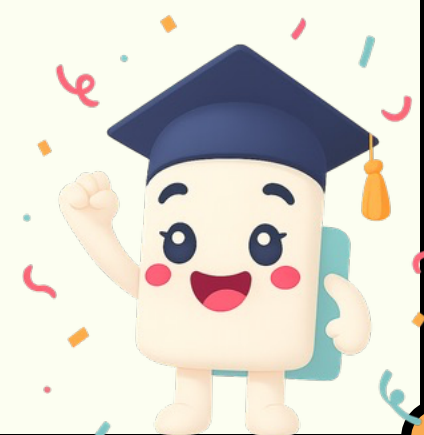


Answer 2

PREVIEW

Answer 2

False.



Question 3

Question 3
How many edges does a cone have?



Answer 3

PREVIEW

Answer 3

A line has 1 edge.



Question 4

Question 4

Which object has two circular faces and one curved surface?

- A. cube
- B. cylinder
- C. sphere
- D. square-based pyramid



Answer 4

PREVIEW

Answer 4
B. cylinder



Question 5

Question 5
What shapes are the faces of a cube?

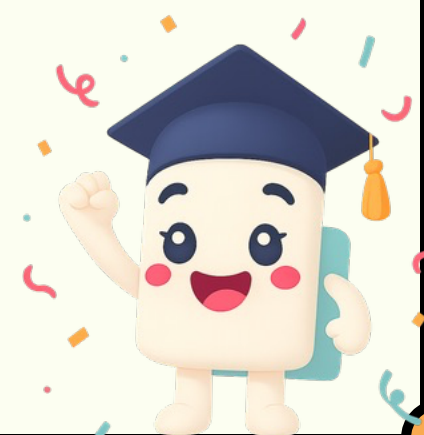


Answer 5

PREVIEW

Answer 5

Squares.



Question 6

Question 6

True or false: A triangular prism has two triangular faces.

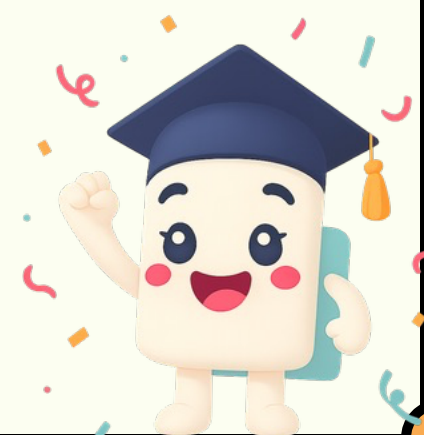


Answer 6

PREVIEW

Answer 6

True.



Question 7

Question 7

Which object has a square base and four triangular faces?

A. cone

B. rectangular prism

C. square-based pyramid

D. cylinder



Answer 7

PREVIEW

Answer 7

C square-based pyramid



Question 8

Question 8
What is another word for corners on a 3D object?



Answer 8

PREVIEW

Answer 8

Vertices.



Question 9

Question 9

Which object has no edges?

- A. sphere
- B. cone
- C. cylinder
- D. cube



Answer q

PREVIEW

Answer 9

A. sphere



Question 10

Question 10

Name one way a cube and a rectangular prism are alike.

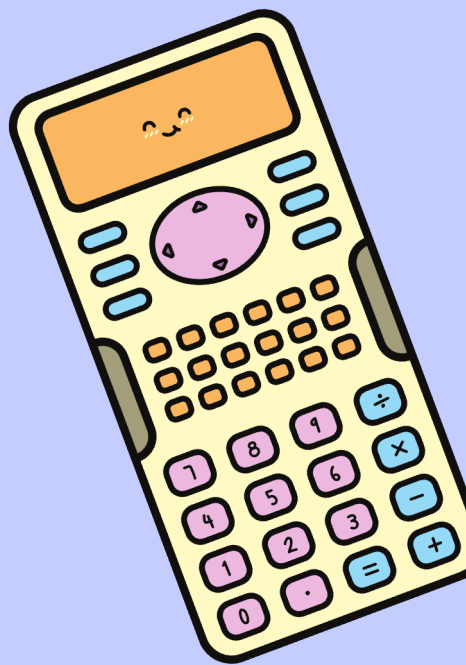
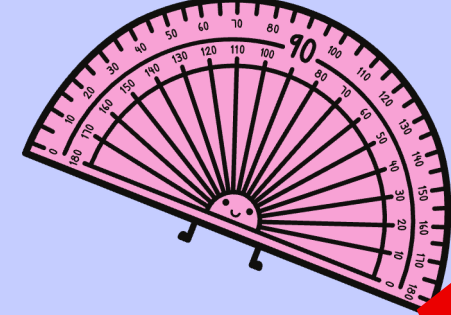
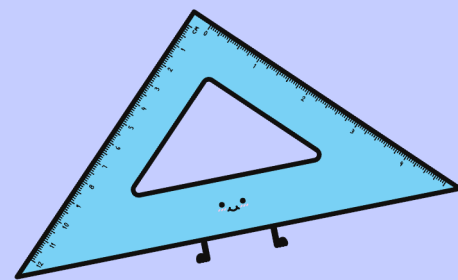
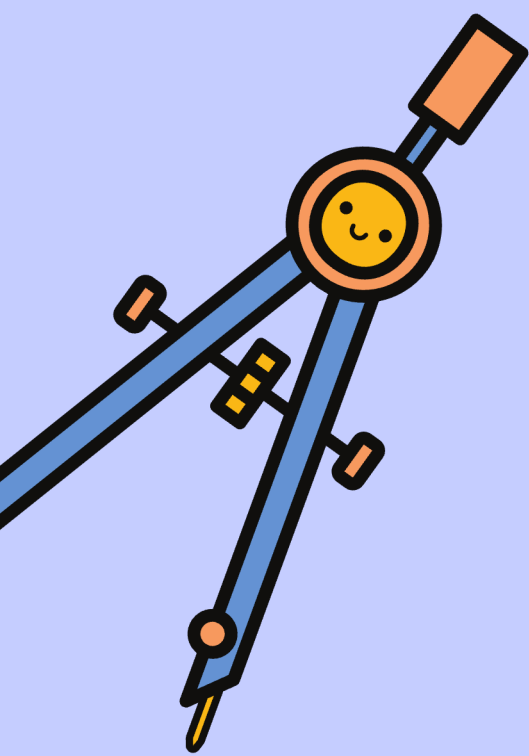


Answer 10

Answer 10

Example: both have 5 faces, 12 edges and 8 vertices.





Well Done!

PREVIEW

