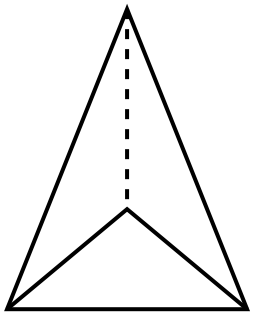
Answers

(1) 6

Step 1

The figure given below shows a triangular pyramid.



We find that it has 4 faces, where the base as well as the remaining three faces are triangles.

Step 2

We know that an edge is a line segment formed by the intersection of two faces.

Step 3

On counting the number of edges, we find that a triangular pyramid has 6 edges.

(2) One

Step 1

Let us draw the possible lines through two distinct points.

We can draw only one line through two distinct points.

Step 2

Thus, only one line can be drawn through the given two distinct points.

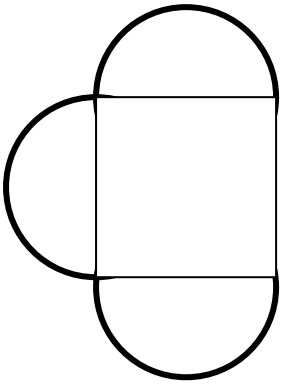
(3) 3

Step 1

We know that a line that bends in a continuous way without making any sharp angles is called a curved line.

Step 2

The highlighted lines in the figure below represent curved lines.



Step 3

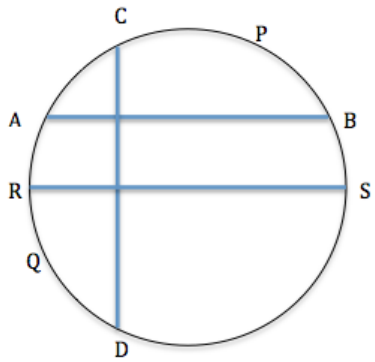
So, we can say that the given figure has **3** curved lines.

(4) Chord

Step 1

A chord is a line segment whose end-points lie on the circumference of a circle.

Step 2

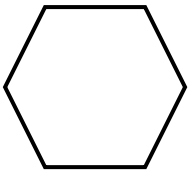


In the figure above, the line segments AB, CD, RS are all chords.

(5) hexagon

Step 1

A closed planar shape with six sides will look as follows:



Step 2

We observe that the given figure is a **hexagon**.

(6) 3

Step 1

A rope of length **18** cm is **divided** equally among **6** children.

Step 2

Let's divide 18 cm by 6:

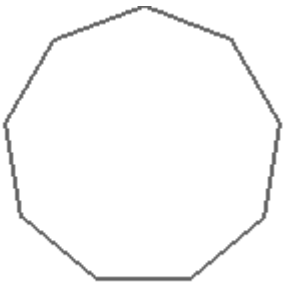
18 cm ÷ 6 = 3 cm

Step 3

The length of each segment is **3 cm**.

(7) Polygon

By definition, any closed figure made of definite number of line segments is called a polygon.
e.g.



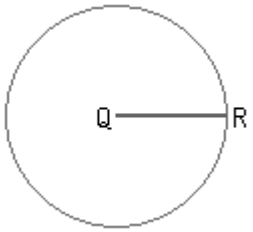
(8) Radius

Step 1

Let us look at the definition of radius:
A line segment joining any point on the circumference of a circle to its center, is called the radius.

Step 2

As an example, let us look at the figure below:



In the figure above, if 'Q' is the center of the circle and 'R' is a point on the circumference of the circle, then QR is the radius of the circle. It describes the distance from the center of the circle to a point on its circumference.

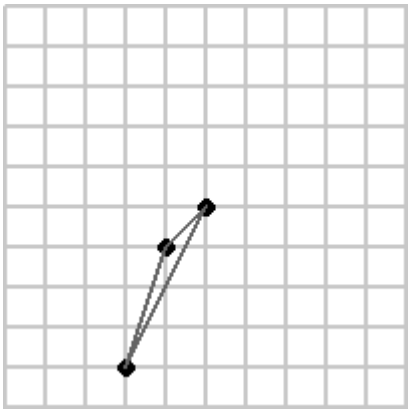
Step 3

Therefore, the common term used to describe the distance from the center of a circle to a point on its circumference is called **radius**.

(9) Triangle

Step 1

On connecting the dots, it will look as following:



Step 2

It can be seen that this is a triangle.

(10) 1 cm

Step 1

We know that the perimeter of any figure is the sum of the length of its boundaries.
Since, the given figure is a quadrilateral, the perimeter of a quadrilateral = Sum of its sides

Step 2

We are given:
Perimeter of the quadrilateral = 13 cm
Length of the first side = 4 cm
Length of the second side = 2 cm
Length of the third side = 6 cm
We have to find the length of the fourth side.

Step 3

Perimeter = Length of the first side + Length of the second side + Length of the third side + Length of the four side
13 cm = 4 cm + 2 cm + 6 cm + Length of the four side
13 cm = 12 cm + Length of the four side
13 cm - 12 cm = Length of the four side
1 cm = Length of the four side

Step 4

Therefore, the missing length is **1 cm**.

(11) c. All spheres are circles

Step 1

Let us go by the options.

Step 2

Option a: A rectangle is a special type of quadrilateral, so all rectangles are quadrilaterals. Hence, the statement is correct.

Step 3

Option b: A square is a special type of quadrilateral. Hence, the statement is correct.

Step 4

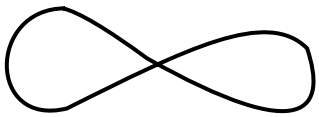
Option c: A sphere is a three dimensional object, but a circle is two dimensional figure. To make it easier, you can take a sphere in your hand and actually put it to some use, but you cannot take a circle in your hand. Hence, the statement is incorrect.

Step 5

Option d: A square has four equal sides and its opposite sides are parallel to each other. The opposite sides of a rectangle are parallel and equal to each other. A square can, thus, be a special case of a rectangle. Hence, the statement is correct.

Step 6

Hence, option **c** is incorrect.



(12) b.

Step 1

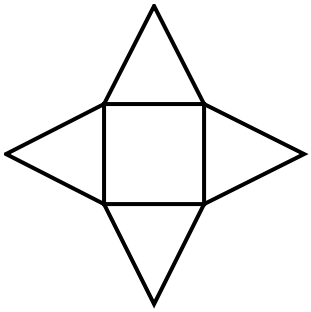
A curve that does not cross itself and ends at the same point where it begins is called a simple closed curve.

Step 2

Let us observe each option one by one.
In option a, the curve does not cross itself and ends at the same point where it begins. Hence, the given curve is a simple closed curve.
In option b, the curve crosses itself. Hence, the given curve is not a simple closed curve.
In option c, the curve does not cross itself and ends at the same point where it begins. Hence, the given curve is a simple closed curve.
In option d, the curve does not cross itself and ends at the same point where it begins. Hence, the given curve is a simple closed curve.

Step 3

Therefore, the curve given in option **b** is not a simple closed curve.



(13) b.

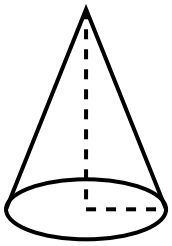
Step 1

We know that a net of a solid shape is a shape that can be folded along the given lines to form that particular solid shape.

Step 2

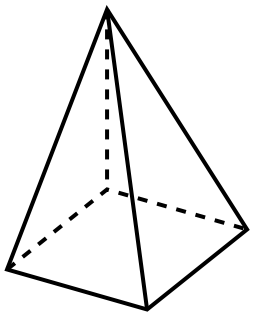
Let us look at the given options one by one.

In option a, if we fold the given net along the given lines, we get:



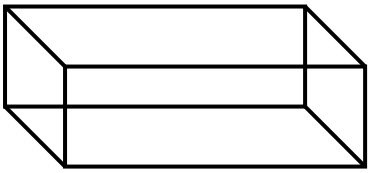
Hence, it is not the correct net for the given solid shape.

In option b, if we fold the given net along the given lines, we get:



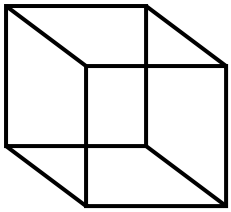
Hence, it is the correct net for the given solid shape.

In option c, if we fold the given net along the given lines, we get:



Hence, it is not the correct net for the given solid shape.

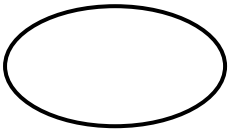
In option d, if we fold the given net along the given lines, we get:



Hence, it is not the correct net for the given solid shape.

Step 3

Therefore, option **b** is the correct answer.



(14) c.

Step 1

Let us observe each option one by one.
Option a represents a plane figure bounded by three line segments.
Option b represents a plane figure bounded by five line segments.
Option c represents a plane figure bounded by a curve.
Option d represents a plane figure bounded by four line segments.

Step 2

We see that the figure given in option c is bounded by a curve and the rest are bounded by line segments.

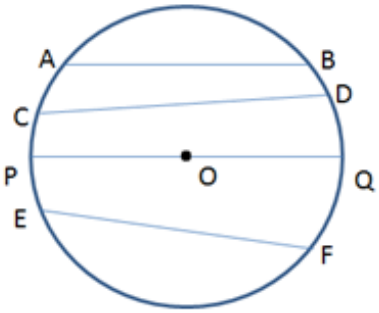
Step 3

Hence, option **c** is the odd one out.

(15) False

Step 1

Let us first understand the definition of a chord and a diameter. A chord is a line segment whose end points lie on the circumference of a circle, whereas diameter is a chord which passes through the center of a circle with end points on the circumference of a circle.



Step 2

In the above figure, AB, CD, PQ, and EF are all chords of the given circle.

Step 3

The longest chord PQ is the diameter as it passes through the center of the circle.

Step 4

Hence, the statement "The chord of a circle can be larger than its diameter" is **False**.