A figure is said to be regular if its sides are equal in length and angles are equal in measure. What do you mean by a regular quadrilateral?

ANSWER:

A square is a regular quadrilateral all of whose sides are equal in length and all of whose angles are equal in measure.

The sum of all the angles of a quadrilateral is
(a) 180°
(b) 270°
(c) 360°
(d) 400°

ANSWER:

(c) 360°
The sum of all the angles of a quadrilateral is 360°.

The three angles of a quadrilateral are 80°, 70° and 120°. The fourth angle is

(a) 110°

(b) 100°

(c) 90°

(d) 80°

ANSWER:

(c) 90°

The three angles of a quadrilateral are 80°, 70° and 120°.

Let the fourth angle be x.

We know that the sum of all the angles of a quadrilateral is 360°.

$$80° + 70° + 120° + x = 360°$$

$$\Rightarrow 270° + x = 360°$$

$$\Rightarrow x = 360° - 270°$$

$$\Rightarrow x = 90°$$

Thus, the fourth angle is 90°.

The angles of a quadrilateral are in the ratio 3 : 4 : 5 : 6. The largest of these angles is

(a) 90°

(b) 120°

(c) 150°

(d) 102°

ANSWER:

Let the angles of a quadrilateral be $(3x)^\circ$, $(4x)^\circ$, $(5x)^\circ$ and $(6x)^\circ$.

Sum of all the angles of a quadrilateral is 360°.

$\therefore \quad 3x + 4x + 5x + 6x = 360°$

$\Rightarrow \quad 18x = 360°$

$\Rightarrow \quad x = \frac{360}{18}$

$\Rightarrow \quad x = 20°$

So,

$3x = 60°$

$4x = 80°$

$5x = 100°$

$6x = 120°$

The largest of these angles is 120°.

So, the correct answer is given in option (b).

If the diagonals of a quadrilateral bisect each other at right angles, then this quadrilateral is
(a) a rectangle
(b) a rhombus
(c) a kite
(d) none of these

ANSWER:

(b) a rhombus
The diagonals of a rhombus bisect each other at right angle.

Question: A quadrilateral has _____ diagonals

a) two
b) four
c) three

Answer: two

Question: Which of the following statements is false?

a) A quadrilateral has four diagonals
b) A quadrilateral has two diagonals
c) A quadrilateral has four angles
d) A quadrilateral has four sides and four vertices

Answer: A quadrilateral has four diagonals