4. Practical Geometry

Q 1 Name the quadrilateral whose opposite sides are parallel.

Mark (1)

Q 2 Name the quadrilateral whose diagonals are equal and bisect each other at right angle.

Mark (1)

Q 3 Why do we call square as a regular quadrilateral?

Mark (1)

Q 4 Construct the quadrilateral ABCD in which AB = 5 cm, BC= 4 cm, $\angle$A = 60°, $\angle$B = 105° and $\angle$C = 105°.

Marks (2)

Q 5 The adjacent sides SP and PQ of a parallelogram PQRS are 4 cm each. State the measure of all the sides. What is another name of this figure?

Marks (2)

Q 6 The ratio of two adjacent sides of a parallelogram is 4:5. If its perimeter is 72 cm, find its adjacent sides.

Marks (2)

Q 7 The park in a town is made in the form of a kite. Its perimeter is 90 metres and one side is 10m more than other side. What are the lengths of other sides?

Marks (2)

Q 8 Construct the trapezium ABCD in which AB $\parallel$ CD, AB = 8 cm, BC = 6 cm, CD = 4 cm and $\angle$B = 60°.

Marks (3)

Q 9 Construct the quadrilateral ABCD in which AB = 4.5 cm, BC = 5.5 cm, CD = 4 cm, AD = 6 cm and AC = 7 cm.

Marks (3)

Q 10 Construct the quadrilateral PQRS where PQ = 4 cm, QR = 6 cm, RS = 5 cm, PS = 5.5 cm and PR = 7 cm.

Marks (3)

Q 11

Construct Quadrilateral ABCD in which AB = 3.5 cm, BC = 4 cm, CD = 5cm, $\angle$B = 45°and $\angle$C = 150°.

Marks (3)

Q 12 Construct the quadrilateral TRUE in which TR = 3.5 cm, RU = 3 cm, UE = 4 cm, $\angle$R = 75° and $\angle$U =120°.

Marks (3)

Q 13 Construct the parallelogram ABCD with AB = 3.5 cm, BC = 4 cm and AC = 6.5 cm.

Marks (3)

Q 14 Construct a rhombus with side 4.5 cm and one diagonal 6 cm.

Marks (3)

Q 15 Construct the quadrilateral ABCD with AB = 4 cm, BC = 6 cm, CD = 5.5 cm, AD= 5 cm and AC = 8 cm.

Marks (3)

Q 16 Construct the quadrilateral HOPE with HO = 4.5 cm, OP = 4 cm, PE = 6.5 cm, EH = 3 cm and OE = 6.5 cm.

Marks (3)

Q 17 Construct the quadrilateral PQRS in which PQ = 4 cm, QR = 3 cm, PS = 2.5 cm, PR = 4.5 cm and QS = 4 cm.

Marks (3)

Q 18 ABCD is a trapezium with AB∥CD, and $\angle$A=50° and $\angle$B = 50°. Prove that
(i) BC = DA
(ii) $\angle$C = $\angle$D and find the measurement of $\angle$C.

Marks (4)

Q 19 The perimeter of a parallelogram is 140 cm. If one of the sides is greater than the other by 20 cm, find the lengths of all the sides of the parallelogram.

Marks (4)

Q 20 ABCD is a trapezium in which AB∥DC and AD = BC. If CE is drawn parallel to AD, meeting AB at E, prove the following:
(i)   AECD is a parallelogram.
(ii) AD = EC
(iii) ☐CEB is an isosceles triangle.

Marks (4)

Q 21 Construct the square READ with RE = 5.1 cm.

Marks (5)

Q 22 Construct a rhombus ABCD where AC = 5.2 cm and BD = 6.4 cm.

Marks (5)

Q 23 Construct a rectangle ABCD with AB = 5 cm and BC = 4 cm.

Marks (5)

Q 24 Construct a quadrilateral ABCD in which AB = 6 cm, BC = 5 cm, $\angle$A = 55°, $\angle$B= 110° and $\angle$D = 90°.

Marks (5)

Most Important Questions

Q 1 Is it possible to construct a quadrilateral ABCD in which AB = 3cm, CD = 3cm, DA = 7.5cm, AC = 8cm and BD = 4cm? If not, give reason.

Q 2 Is it possible to construct a quadrilateral ABCD in which AB = 5cm, BC = 7.5cm, $\angle A = 80°$, $\angle B = 140°$, $\angle C = 145°$? If not, give reason.

Q 3 Construct a quadrilateral ABCD in which AB=4.4cm,BC=4cm,CD=6.4cm,DA=2.8cm and BD=6.6cm.?

Q 4 Construct a parallelogram ABCD where AB=3.6cm,BC=4.2cm and AC=6.5cm.?

Q 5 Construct a rhombus with side 4.5cm and one diagonal 6cm.

Q 6 Construct a quadrilateral ABCD in which AB = 5cm, BC = 4cm, AD = 3cm, CD = 6cm and BD = 5cm.

Q 7 Construct a quadrilateral ABCD in which AB = BC = 3cm, AD = 5cm, A = 90° and B = 105°.

Q 8 Construct a rectangle with sides 4.5cm and 6cm.

Q 9 Construct a quadrilateral ABCD in which AB = 7cm, AD = 6cm, AC = 7cm, BD = 7.5cm and BC = 5cm.

Q 10 Construct a quadrilateral ABCD in which AB = 5.5 cm,AD = 4.4 cm,CD = 6.5 cm,AC = 6.5 cm and BD = 7.1 cm.?

Q 11 Construct a quadrilateral ABCD in which AB=5.4cm,BC=2.5cm,CD=4cm,AC=6.5cm and BD=5cm.?

Q 12 Construct a quadrilateral ABCD in which AB = 6 cm, BC = 5 cm, $\angle A = 55°$, $\angle B = 110°$ and $\angle D = 90°$.

Q 13 Construct a quadrilateral PQRS in which $\angle Q = 45°$, $\angle R = 90°$, QR = 5cm, PQ = 4cm and RS = 3 cm.

Q 14 Construct a quadrilateral ABCD in which AB=3.6cm, BC=5.5cm, CD=5cm, angle B=125 and angle C=80?

Q 15 Construct a quadrilateral ABCD in which AB=5.1cm,AD=4cm,BC=2.5cm, angle A=60 and angle B =85?

Q 16 Construct a quadrilateral ABCD in which AB=3.5cm,BC=6.5cm, $\angle A$=75° and $\angle B$=105° and $\angle C$=120°?

Q 17 Construct a quadrilateral ABCD in which AB=5.3 cm,AD = 2.9 cm, $\angle A$=70° and $\angle B$ = 95° and $\angle C$ = 85° ?

Q 18 Construct a quadrilateral in which QR = 7.5 cm, RP = PS = 6 cm, RS = 5 cm and QS = 10 cm.

Q 19 Construct a trapezium ABCD in which AB $\parallel$ CD, AB = 8 cm, BC = 6.0 cm and CD = 4 cm and $\angle B$ = 60°.

Q 20 Construct a parallelogram whose two sides and one angle are 4 cm, 5.5 cm and 70° respectively.