

Himalaya International School

Class- VIII

Subject - Mathematics

Practice Assignment - 4

Understanding Quadrilaterals

Practical Geometry

Area of Polygons

Visualising Solid Shapes

Mensuration of 3-D Shapes

Q1 A polyhedron has 10 edges and 6 vertices. How many faces does this polyhedron have?

Q2 How many vertices, faces and edges do hexagonal prism and octagonal pyramid have?

Q3 The area of a trapezium is 480 cm^2 . If the parallel sides are 48cm and 72cm long, find the distance between them.

Q4 The perimeter of each face of a cube is 20cm. Find it's lateral surface area.

Q5 Three cubes of side 4cm are joined end to end. Find the surface area of the resulting cuboid.

Q6 Construct a quadrilateral ABCD in which $AB= 4.5\text{cm}$, $BC= 5.2\text{cm}$, $CD= 4.8\text{cm}$, $AD= 5\text{cm}$ and diagonal $AC= 6.5\text{cm}$.

Q7 Construct a quadrilateral ABCD in which $AB= 4.5\text{cm}$, $BC= 2\text{cm}$, angle $A = 45^\circ$, angle $B= 135^\circ$ and angle $C= 90^\circ$.

Q8 Construct a parallelogram one of whose sides is 5cm and whose diagonals are 6.2cm and 7cm.

Q9 The lateral surface area of a hollow cylinder is 5220 cm^2 . It is cut along its height and formed into a rectangular sheet of width 36cm. Find the perimeter of the rectangular sheet.

Q10 The radii of two cylinders are in the ratio 2:3 and their heights are in the ratio 5:3. Find the ratio of their volumes.

Q11 A quadrilateral is a closed shape and a type of polygon that has four sides, four vertices and four angles. It is formed by joining four non-collinear points. The sum of interior angles of quadrilaterals is always equal to 360 degrees. The

measures of two angles of a quadrilateral are 135° and 45° . The remaining two angles are equal. Find the measure of each of the equal angles.

Q12 The diagonals of a rhombus are 6cm and 8cm. Find the length of a side of the rhombus.

Q13 Construct a rectangle ABCD given that side $AB = 5\text{cm}$ and the diagonal $AC = 6.5\text{cm}$.

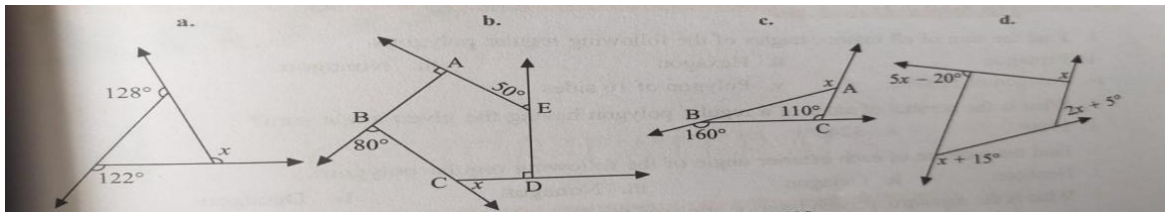
Q14 Find the curved surface area and total surface area of a right circular cylinder whose height and radius of the base are 20cm and 7cm.

Q15 How many sides does a regular polygon have if each of its interior angle is 150° ?

Q16 The angles of a quadrilateral are in the ratio 3:4:5:6. Find the measure of the angles.

Q17 The ratio of the breadth of a parallelogram to its length is 2:3. If its perimeter is 120cm, find the dimensions of the parallelogram.

Q18 Find x in the following figures:



Q19 The measures of two adjacent angles of a parallelogram are in the ratio 5:4. Find the measure of each of the angles of the parallelogram.

Q20 A brick is a man-made building material used to make walls and make places to walk. It is a single unit of a kneaded clay-bearing soil, sand and lime, or concrete material, fire-hardened or air-dried, used in masonry construction.

How many bricks will be required to construct a wall 10m long, 40cm wide and 3m high if each brick measures $25\text{cm} \times 12\text{cm} \times 8\text{cm}$?