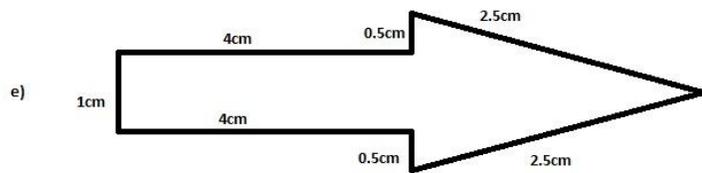
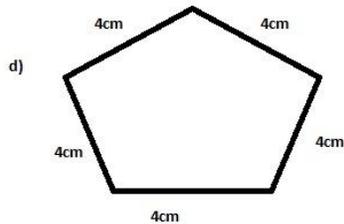
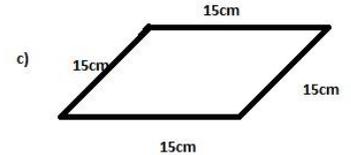
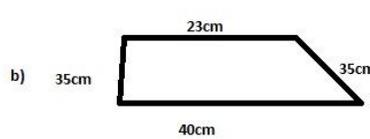
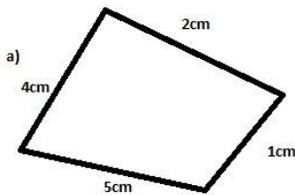


# MATHEMATICS

## CLASS VI

1) Find the perimeter of each of the following figures



2) Find the perimeter of

a) a triangle of sides 3cm, 4cm, 5cm

b) an equilateral triangle of side 9cm

c) an isosceles triangle with equal sides 8cm each and third side 6cm.

3) Find the perimeter of a triangle with side measuring 10cm, 14cm and 15cm

4) Find the perimeter of the following rectangles

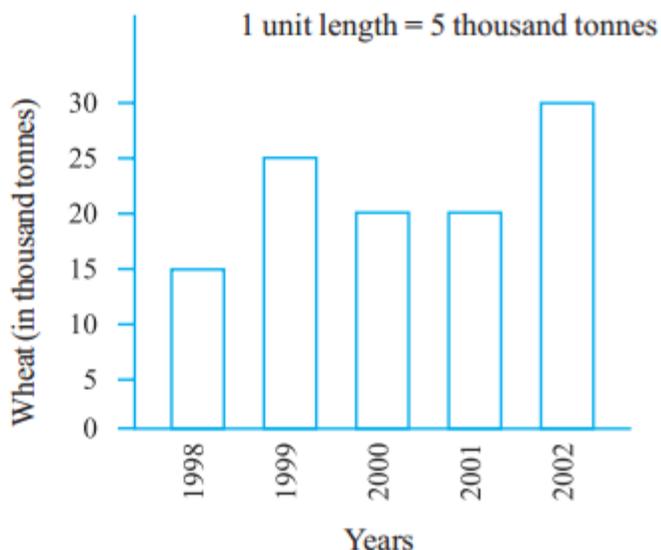
Length	Breadth	Perimeter=2(L+b)
25	12	$2 \times (25+12) = 2 \times 37 = 74\text{cm}$
18	15	
10	4	
15	9	

## Chapter 12 Questions from Exercise12.1

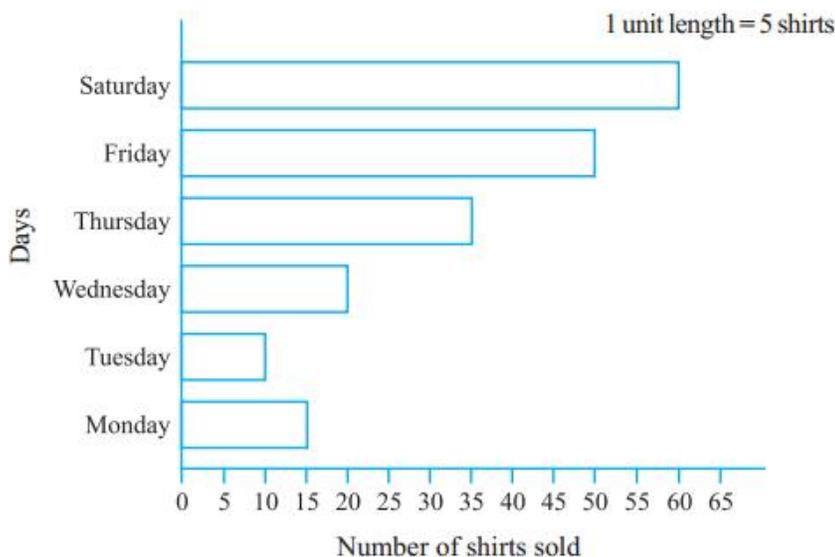
1. The bar graph given alongside shows the amount of wheat purchased by government during the year 1998-2002.

Read the bar graph and write down your observations. In which year was

- (a) the wheat production maximum?  
(b) the wheat production minimum?



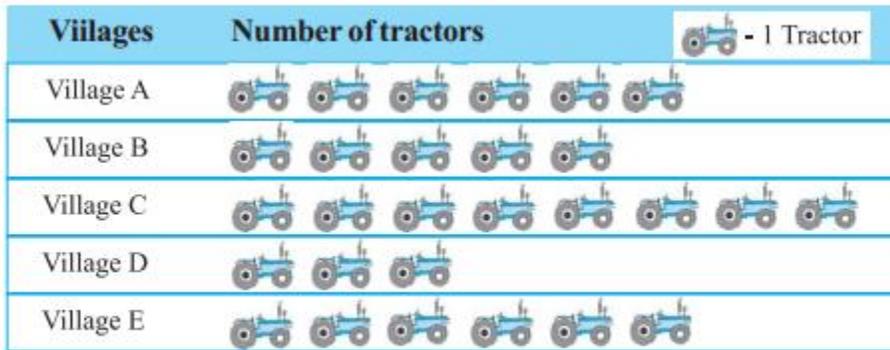
2. Observe this bar graph which is showing the sale of shirts in a ready made shop from Monday to Saturday.



Now answer the following questions :

- (a) What information does the above bar graph give?  
(b) What is the scale chosen on the horizontal line representing number of shirts?  
(c) On which day were the maximum number of shirts sold? How many shirts were sold on that day?  
(d) On which day were the minimum number of shirts sold?  
(e) How many shirts were sold on Thursday?
- 3.

Following pictograph shows the number of tractors in five villages.

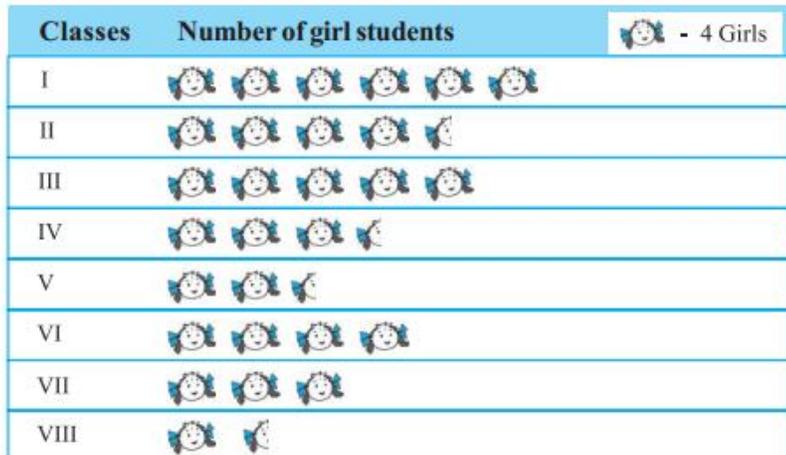


Observe the pictograph and answer the following questions.

- Which village has the minimum number of tractors?
- Which village has the maximum number of tractors?
- How many more tractors village C has as compared to village B.
- What is the total number of tractors in all the five villages?

4.

The number of girl students in each class of a co-educational middle school is depicted by the pictograph :



Observe this pictograph and answer the following questions :

- Which class has the minimum number of girl students?
- Is the number of girls in Class VI less than the number of girls in Class V?
- How many girls are there in Class VII?

## CLASS VIII

1) Solve  $\left[\frac{6}{5}ab\right] \times \left[\frac{5}{6}bc\right] \times \left[\frac{12}{9}abc\right]$

2) Factorise a)  $x^2+8x+16$  b)  $4a^2-4a+1$

3) Find the value of P so that

$$(-2)^{P+5} \times (-2)^2 = (-2)^8$$

4) Express  $8^{-3}$  as a power with the base 2.

5) Find the curved surface area and total surface area of a cylinder ,  
the diameter of whose base is 7 cm and height 60 cm.

6) The volume and the curved surface area of a cylinder are  $1650 \text{ cm}^3$

and

$660 \text{ cm}^2$  respectively. Find the radius and height of the cylinder.

7) How many cubic meters of earth must be dug out to sink a well 21m

deep

and 6 m diameter.

8) The volume of a cuboid is  $440 \text{ cm}^2$  and the area of its base is  $88 \text{ cm}^2$ .

Find the height.

9) A class room is 11m long 8m wide and 5m high. Find the sum of the

area

of its floor and the four walls.

10) Simplify the expression and evaluate them as directed.

a)  $x(x-3)+2$  for  $x=1$

b)  $24x(1-2x)$  for  $x=3$

11) Divide  $(5x^3-15x^2+25x) \div 5x$

1. Find the area of a quadrilateral, with one diagonal 5.5 cm and the perpendicular distances 2.5cm and 1.5cm.
2. Find the area of a rhombus, with diagonals 10cm and 8.2cm.
3. The area of a trapezium is  $480\text{m}^2$ . The distance between two parallel sides is 15 m and one of the parallel sides is 20m. Find the other parallel side.
4. The area of a rhombus is  $240\text{cm}^2$  and one of its diagonals is 16cm. Find the other diagonal.
5. A cuboidal aquarium is with dimensions 80cm x 30cm x 40cm . its base , side faces and back face are to be covered with a coloured paper. Find the area of the paper needed.
6. The internal dimensions of a room are 12m x 8m x 4m. Find the cost of white washing its four walls at the rate Rs. 5 per sq. m.
7. In a building there are 3 cylindrical pillars. The radius of each pillar is 28cm and height 4m. find the cost of painting their C S A at the rate Rs.8 per sq. m.
8. Find the height of a cuboid whose volume is  $275\text{ cm}^3$ .
9. A godown is in the form of a cuboid, 60m x 40m x 30m. How many cuboidal boxes of volume  $0.8\text{m}^3$  can be stored in the godown?
10. A rectangular paper 11cm x 4cm is folded to make a cylinder of height 4cm. Find the volume of the cylinder.

## CLASS IX

- 1) The following table gives the performance of 90 students in a Mathematics test of 100 marks.

Marks	0-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90
No.of Students	7	10	10	20	20	15	8	8

Draw a Histogram to represent this data.

- 2) Find the value of P if the mean of the following distribution is 7.5

x	3	4	7	9	11	13
6	6	8	15	p	8	4

- 3) If the line  $kx+4y=12$  passes through point  $(1,0)$  find  $k$ .
- 4) Draw the graph of  $x+3y-8=0$
- 5) Find three solutions of  $x+4y = 27$
- 6) Find three solutions of  $x-y=3$
- 7) DEFG is a parallelogram with GH perpendicular DE. If  $GH=10\text{cm}$  and  $GF=12\text{cm}$   
Find  $ar[\Delta GEF]$  and  $ar[\Delta EFG]$ .
- 8) In  $\Delta PQR$  base QR is divided at X such that  $QX=\frac{1}{2}XR$ . If  $ar[\Delta PQR]=81\text{cm}^2$ ,  
find  $ar[\Delta PQX]$ .
- 9) In a quadrilateral the angles are in the ratio 2:4:5:7. Find the difference between the greatest and the smallest angles.
- 10) A conical tent is 10m high and the radius of its base is 24m. Find
- Slant height of the tent.
  - Cost of the canvas required to make the tent if the cost of  $1\text{m}^2$  canvas is Rs.70

1. In a building there are 3 cylindrical pillars. The radius of each pillar is 28cm and height 4m. Find the cost of painting their C S A at the rate Rs.8 per sq. m.
2. Find the surface area of a cuboid with size 40cm x 28cm x 15cm.
3. A box open at the top has its outer dimensions 14cm x 2.5cm x 18cm. Its thickness is 0.5cm. Find the volume of the metal used.
4. The radii of two cylinders are in the ratio 2 : 3 and their heights are in the ratio 5 : 4.  
Find the ratio of their volumes.
5. The C S A of a cone is  $4070\text{cm}^2$  and its diameter is 70cm. Find its slant height.
6. A semicircular sheet of metal of diameter 35cm is bent into an open conical cup. Find the depth and capacity of the cup.
7. A cuboidal aquarium is with dimensions 80cm x 30cm x 40cm . its base , side faces and back face are to be covered with a coloured paper. Find the area of the paper needed.
8. The largest sphere is carved out of a cube of side 7cm .Find the volume of the sphere.
9. If the radius of a sphere is doubled,what is the ratio of the volume of the first sphere to that of the second.
- 10.A vessel is in the form of a hemispherical bowl mounted by a hollow cylinder. The diameter of a sphere is 14cm and the total height of the vessel is 13cm. Find its capacity.
- 11.Spherical ball of diameter 21cm is melted and recasted into cubes, each of sides 1cm. Find the number of cubes thus formed.
- 12.A cylindrical jar of radius 6cm contains oil. Iron spheres each of radius 1.5cm are immersed in the oil. How many spheres are necessary to raise the level of oil by 2cms.

## **CLASS X**

1. An athlete runs on a circular track of radius 49cm and covers a distance of 3080m along its boundary .How many rounds has he taken to cover this distance .
2. A bicycle wheel of radius 35cm is making 25 revolutions in 10 seconds .At what speed (in km/hr) is the bicycle moving?
3. A circular garden has a 4m wide path around it .Find the radius of the garden, if the area of the path is 1408metre square.
4. The circumference of a circle exceeds its diameter by 16.8cm. Find the circumference of the circle

5. A wire when bent in the form of a square encloses an area 121 sq cm. If the wire were bent in the form of a circle, find the area enclosed by the circle.
6. If the area of a sector of a circle is  $\frac{5}{18}^{\text{th}}$  of the area of the circle, then find the central angle of the sector
7. In a circle of radius 7cm, an arc subtends an angle of 108 degree at the Centre. Find the area of the sector.
8. A chord AB of a circle of radius 15cm subtends an angle of 60 degree at the centre of the circle . Find the areas of the major and minor segments
9. Find the area of a square inscribed in a circle of radius 8cm.
10. A farmer has a circular field of radius 120cm. It has a well in the middle of the field of radius 8 metres . How much area has he for growing his crops .