RD Sharma Solutions

Class 8 Maths

Chapter 27

Ex 27.2

Q 1. The following table shows the number of patients discharged from a hospital with HIV diagnosis in different years:

Years:	2002	2003	2004	2005	2006
Number of patients:	150	170	195	225	230

Represent this information by a graph.

SOLUTION:

Here, year is an independent variable and the number of patients is a dependent variable. So, we take years on the x-axis and the number of patients on the y-axis.
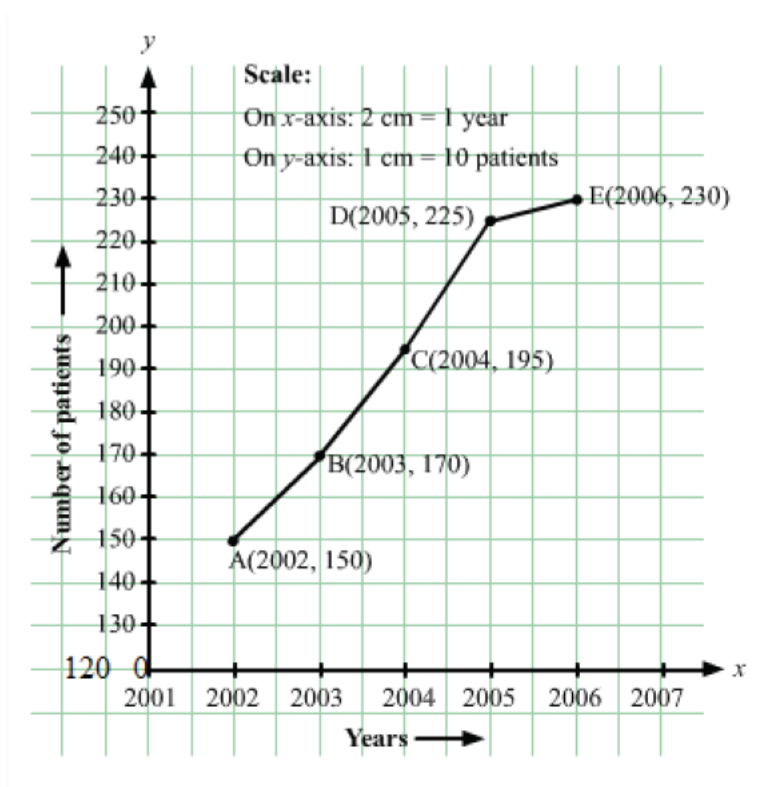
Let us choose the following scale:

On x-axis: 2 cm = 1 year

On y-axis: 1 cm = 10 patients

Also, let us assume that on the x-axis, origin (O) represents 2001 and on the y-axis, origin (O) represents 120, i.e. O (2001, 120).

Now, let us plot (2002, 150), (2003, 170), (2004, 195), (2005, 225), (2006, 230). These points are joined to get the graph representing the given information as shown in the figure below.

Q 2. The following table shows the amount of rice grown by a farmer in different years:

Years:	2000	2001	2002	2003	2004	2005	2006
Rice grown (in quintals):	200	180	240	260	250	200	270

Plot a graph to illustrate this information.

SOLUTION:

Here, the year is an independent variable and quantity of rice grown is a dependent variable. So, we take years on the x-axis and quantity of rice grown on the y-axis.

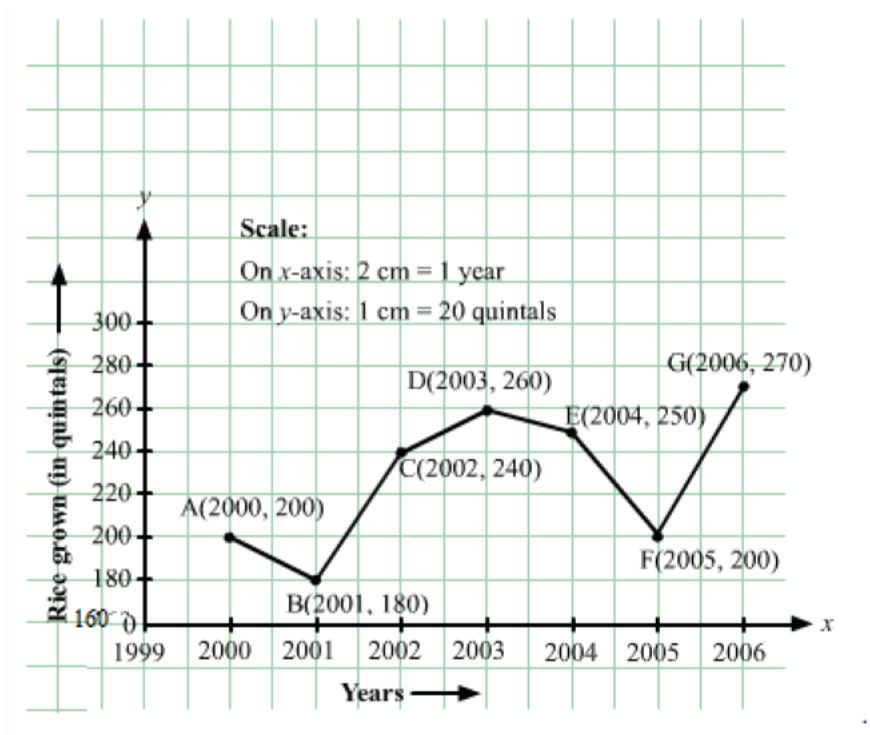Let us choose the following scale:

On x-axis: 2 cm = 1 year

On y-axis: 1 cm = 20 quintals

Let us assume that the origin O represents the coordinates (1999, 160).

Now, let us plot (2000, 200), (2001, 180), (2002, 240), (2003, 260), (2004, 250),(2005, 200),(2006, 270).

These points are joined to get the graph representing the given information as shown in the figure below.

Q 3. The following table gives the information regarding the number of persons employed to a piece of work and time taken to complete the work:

Number of persons:	2	4	6	8
Time taken (in days):	12	6	4	3

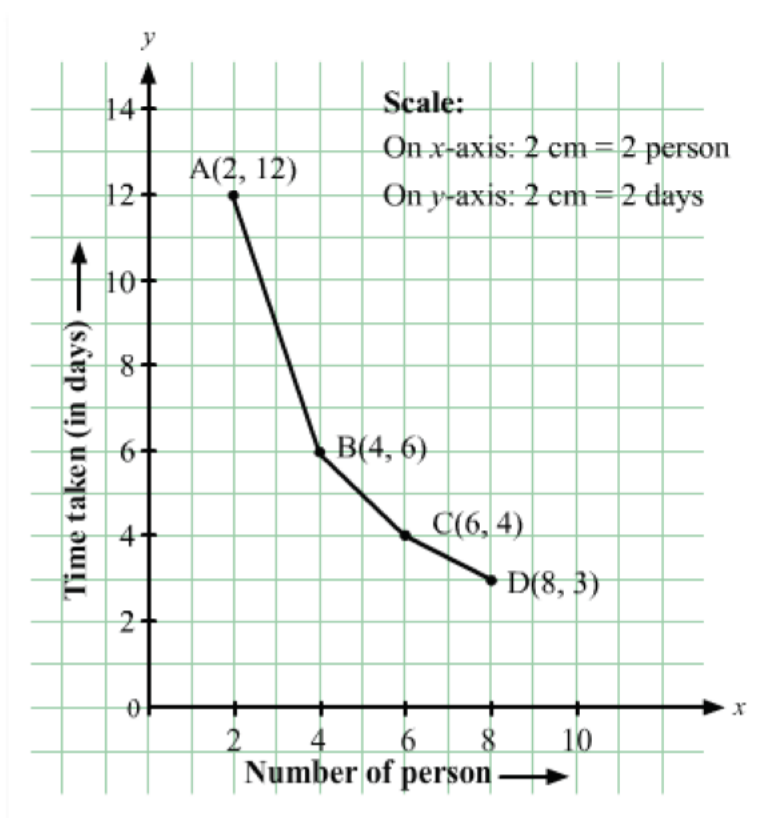**Plot a graph of this information.**

SOLUTION:

Here, the number of persons is an independent variable and time taken is a dependent variable. So, we take the number of persons on the x-axis and time taken on the y-axis.

Let us choose the following scale:

On x-axis: 2 cm = 2 persons

On y-axis: 2 cm = 2 days

Now, let us plot (2, 12), (4, 6), (6, 4), (8, 3). These points are joined to get the graph representing the given information as shown in the figure below.

Scale:
On x-axis: 2 cm = 2 person
On y-axis: 2 cm = 2 days

A(2, 12)

B(4, 6)

C(6, 4)

D(8, 3)

Time taken (in days)

Number of person →

Q 4. The following table gives the information regarding the length of a side of a square and its area:

Length of a side (in cm):	1	2	3	4	5
Area of square (in cm²):	1	4	9	16	25

Draw a graph to illustrate this information.
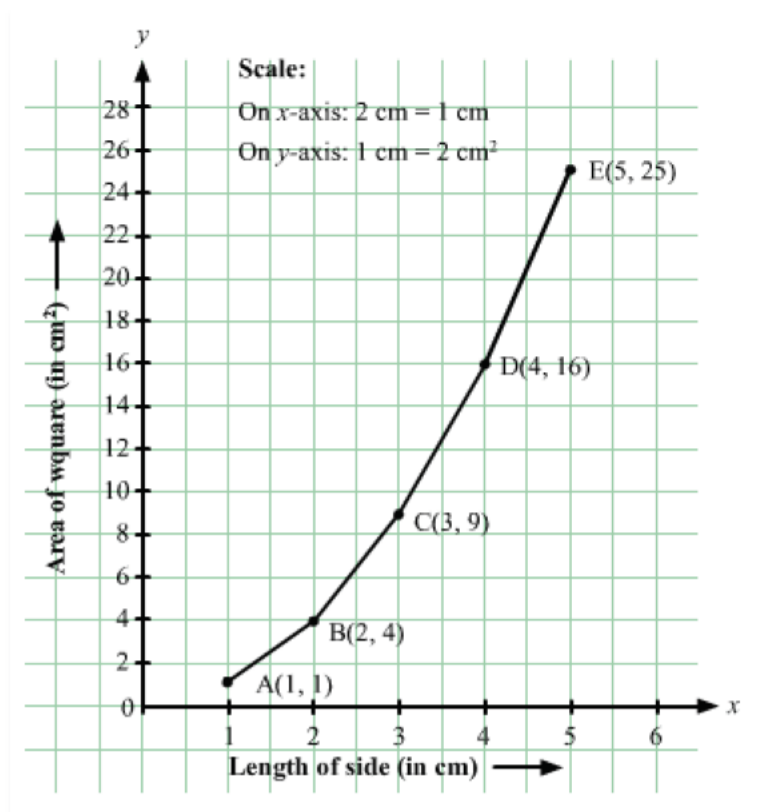
SOLUTION:

Here, length of a side is an independent variable and area of the square is a dependent variable. So, we take the length of a side on the x-axis and area of the square on the y-axis.

Let us choose the following scale:

On x-axis: 2 cm = 1 cm

On y-axis: 1 cm = 2 cm²

Now we plot (1,1), (2,4), (3,9), (4,16), (5,25). These points are joined to get the graph representing the given information as shown in the figure below.

Scale:
On x-axis: 2 cm = 1 cm
On y-axis: 1 cm = 2 cm²

E(5, 25)
D(4, 16)
C(3, 9)
B(2, 4)
A(1, 1)

Area of wquare (in cm²)

Length of side (in cm) →

Q 5. The following table shows the sales of a commodity during its years 2000 to 2006.

Years:	2000	2001	2002	2003	2004	2005	2006
Sales (in lakhs of Rs):	1.5	1.8	2.4	3.2	5.4	7.8	8.6

Draw a graph of this information.

SOLUTION:

Here, year is an independent variable and sales is a dependent variable. So, we take year on the x-axis and sales on the y-axis.

Let us choose the following scale:

On x-axis: 2 cm = 1 year

On y-axis: 2 cm = 1 lakh rupees

Assume that on x-axis, origin (O) represents 1991.

So, the coordinates of O are (1991,0).

Now, let us plot (2000, 1.5), (2001, 1.8), (2002, 2.4), (2003, 3.2), (2004, 5.4), (2005, 7.8) and (2006, 8.6). These points are joined to get the graph representing the given information as shown in the figure below.