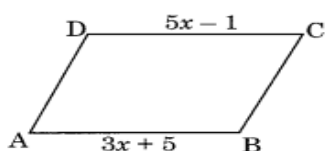


Choose the correct option:

- 11) Each of the angles of a square is_____. 1
a) Acute angle b) Right angle c) Obtuse angle d) 180 degree
- 12) The volume of a cuboid with length, breadth and height as $5x$, $3x^2$ and $7x^4$ respectively is: 1
a) $105x^7$ b) $105x^2$ c) $105x^4$ d) $105x$
- 13) The side-view of a cone appears as: 1
a) Circle b) Square c) Rectangle d) Triangle
- 14) The area of a rhombus is 240 cm^2 and one of the diagonals is 16 cm . Find the other diagonal. 1
a) 16 cm b) 20 cm c) 30 cm d) 36 cm
- 15) The multiplicative inverse of 7^{-2} is: 1
a) 7^2 b) 7 c) $1/7^2$ d) $1/7$
- 16) The common factor of a^3b^3 and ab^2 is: 1
a) a^2b^2 b) ab^2 c) a^2b d) ab
- 17) The factorisation of $12a^2b+15ab^2$ gives: 1
a) $3ab(4ab+5)$ b) $3ab(4a+5b)$ c) $3a(4a+5b)$ d) $3b(4a + 5b)$
- 18) Which point lies only on y-axis? 1
a) $(-2,0)$ b) $(2,0)$ c) $(0,-2)$ d) $(2,-2)$
- 19) The number 2146587 is divisible by: 1
a) 7 b) 3 c) 11 d) None of the above
- 20) The generalised form of 129 is: 1
a) $100+90+2$ b) $100+20+9$ c) $100+2+9$ d) None of the above

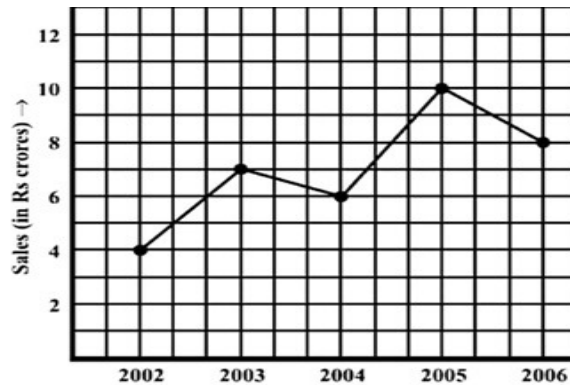
SECTION: B

- 21) A tetrahedron has 4 vertices and 6 edges. Find the number of faces it has. 2
- 22) Factorize : $(10x - 25) \div (2x - 5)$ OR $a^2 + 8a + 16$ 2
- 23) In the given figure, ABCD is a parallelogram. Find x. 2



- 24) A flooring tile has the shape of a parallelogram whose base is 24 cm and the corresponding height is 10 cm . How many such tiles are required to cover a floor of area 1080 m^2 ? 2
- 25) Find the value of : $(3^{-1} \times 9^{-1}) \div 3^{-2}$ 2
- 26) Find x so that $(-5)^{x+1} \times (-5)^5 = (-5)^7$ 2

- 27) The following line graph shows the yearly sales figures for a manufacturing company. 2



- (a) What were the sales in (i) 2002 (ii) 2006?
 (b) Compute the difference between sales in 2002 and 2006.
- 28) Find the values of P and Q from the given addition problem 2

$$\begin{array}{r}
 3 \quad P \quad 4 \quad 3 \\
 + 4 \quad 2 \quad 7 \quad Q \\
 \hline
 7 \quad 9 \quad 1 \quad 7
 \end{array}$$

SECTION: C

- 29) Subtract: $3a(a + b + c) - 2b(a - b + c)$ from $4c(-a + b + c)$ 3
- 30) In a stack there are 5 books each of thickness 20 mm and 5 paper sheets each of thickness 0.016mm. What is the total thickness of the stack? 3
- 31) A farmer has enough food to feed 20 animals in his cattle for 6 days. How long would the food last if there were 10 more animals in his cattle? 3

OR

A photograph of a bacteria enlarged 50,000 times attains a length of 5 cm, as shown in the diagram. What is the actual length of the bacteria? If the photograph is enlarged 20,000 times only, what would be its enlarged length?

- 32) Factorise : $12xy(9x^2 - 16y^2) \div 4xy(3x + 4y)$ 3

SECTION : D

- 33) The opposite angles of a parallelogram are $(3x + 5)^\circ$ and $(61 - x)^\circ$. Find the measure of four angles. 4
- 34) A closed cylindrical tank of radius 7cm and height 5m is made from a sheet of metal. If the breadth of the rectangular sheet is 10m, then find the length of the sheet. 4

OR

The internal measures of a room are $12m \times 8m \times 4m$. Find the total cost of white washing all four walls of a room if the cost of white washing is Rs 5 per sq m.

- 35) Draw a line passing through (2,3) and (3,2). Find the coordinates of the points at which this line meets the x- axis and y- axis. 4

OR

Use the tables below to draw linear graphs:

The number of days a hillside city received snow in different years.

Year	2006	2007	2008	2009
Days	10	8	14	9

4

- 36) Evaluate : $(2xy) \times (x^2y/4) \times (x^2) \times (y^2)$ when $x = 2$, and $y = -1$.

- 37) Factorise the following using the identities :

4

a) $25m^2 + 30m + 9$ b) $9x^2y^2 - 16$

SECTION: E

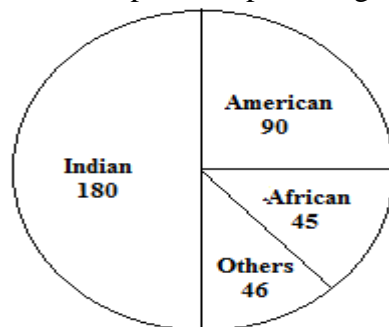
- 38) A school is an educational institution designed to provide learning spaces and learning environments for the teaching of students under the direction of teachers. Sheela goes to school at an average speed of 12km/hr in 20min and Syna goes to school by motor cycle at an average speed of 40km/hr. Sheela wants to reach her school in 15minutes. (3+3)



Answer the following questions :

- What should be the average speed of Sheela to reach school in 15min?
- What is the distance of school from Sheela's house?

- 39) The following pie chart depicts the percentage of students, nationwide. (3+3)



What is the percentage of : i) Indian students ii) African students

