

ANSWERS

SECTION 1 : HOME ASSIGNMENTS

MATHEMATICS PART-I

Chapter 1 :

Activity 1 (A) : $\{2\}$, 2 , 2 , $=$.

Activity 1 (B) : $n(B)$, $n(A \cap B)$, 29 , 7 , 8 , 21 .

Activity 2 (A) : $n(A \cup B)$, 36 , 36 , 12 .

Activity 2 (B) : $1, 2, 3, 4, 5, 6, 7, 8, 9, 10$, 10 , $2, 3, 4, 5$, $4, 5, 9$, $4, 5, 10$, 2 .

Chapter 2 :

Activity 3 (A) : 25 , 5 , $9 - 4 + 5$, 10 .

Activity 3 (B) : 10 , $0.\dot{7}$, $7.\dot{7}$, $0.\dot{7}$, 7 , $\frac{7}{9}$.

Activity 4 (A) : $+1$, 6 , 4 , $\frac{4}{3}$.

Activity 4 (B) : $\sqrt{5} - \sqrt{3}$, $\sqrt{5} - \sqrt{3}$, $\sqrt{5} - \sqrt{3}$, 2 , $(\sqrt{3})^2$, $\frac{8 - 2\sqrt{15}}{2}$.

Chapter 3 :

Activity 5 (A) : $x^3 + 2x^2 + 2$, 1 , x^8 , 2 .

Activity 5 (B) : 1 , 5 , -2 , 2 , $y^2 - 2y + 3$, 2 .

Activity 6 (A) : -1 , -2 , 2 , 7 .

Activity 6 (B) : $3x$, x , $\sqrt{3}$, $\sqrt{3}$, 1 , $\sqrt{3x + 1}$.

Chapter 4 :

Activity 7 (A) : $\sqrt{35}$, $\sqrt{81}$, $<$, $<$.

Activity 7 (B) : c , b , b , $c + d$, $a - b$, d .

Activity 8 (A) : 36 , 22 , 16 , $2a - 2b + 2c$.

Activity 8 (B) : m^2 , $x + y$, $x - y$, $(x + y)^2$, x^2y^2 , $(x + y)$.

Chapter 5 :

Activity 9 (A) : 10 , $(-3, 10)$, (-5) , $(-5, 12)$.

Activity 9 (B) : $8y$, 16 , $(x + y)$, 2 , -2 , -1 .

Activity 10 (A) : $y - x = 7$, $x + y = 53$, 60 , 30 .

Activity 10 (B) : $7x$, 21 , 3 , 15 , -6 , -2 .

Chapter 6 :

Activity 11 (A) : 6000 , 10000 , 6000 , 4000 .

Activity 11 (B) : 520000 , 400000 , 120000 , 48000 , 120000 , 72000 .

Activity 12 (A) : 10000 , 15000 , 10000 , 15000 .

Activity 12 (B) : N , 100 , 220000 , 2200 , 2200 , 24200 .

Chapter 7 :

Activity 13 (A) : 15 , 20 , 35 , 17.5 .

Activity 13 (B) : 12 , $10 - 15$, 24 , 8 , 8 , 42 .

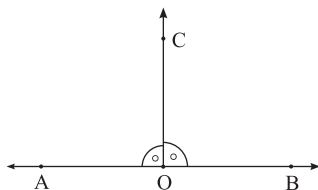
Activity 14 (A) : Σf_i , 525 , 25 , 21 .

Activity 14 (B) : $20 - 30$, 20 , 20 , 30 , 34 , 36 .

MATHEMATICS PART-II

Chapter 1 :

Activity 1 (A) :



Given : O is a point on line AB. $\angle AOC \cong \angle COB$,

To prove : $\angle AOC = \angle COB = 90^\circ$,

Converse of the statement : If the angles in a linear pair are right angles then they are congruent.

Activity 1 (B) : $d(B, C)$, 7.5, 18, 18, 7.5, 10.5.

Activity 2 (A) : $>$, $(x+3)$, $(x-3)$, 6.

Activity 2 (B) : linear, 180° , $3x^\circ$, 120° , 60° , 60° .

Chapter 2 :

Activity 3 (A) : 110° , 181° , are not, is not.

Activity 3 (B) : $\angle e$, $\angle b$, $\angle e$, $\angle f$, $\angle d$, $\angle c$.

Activity 4 (A) : $\angle ADC$, 56° , $\angle CPD$, 80° .

Activity 4 (B) : Vertically opposite angles, 20° , 180° , 20° , 20, 160.

Chapter 3 :

Activity 5 (A) : (i) SSS, (ii) SAS, (iii) ASA, (iv) hypotenuse-side.

Activity 5 (B) : QPR, 70° , 180° , 70° , 20° , 90° .

Activity 6 (A) : seg CB, seg AD, Common side, SSS test.

Activity 6 (B) : Vertically opposite angles, TR, SAS, $\angle TSR$, $\angle TQP$, seg SR.

Chapter 4 :

Activity 7 (A) and (B) and 8 (A) and (B)

Students should complete the constructions.

Chapter 5 :

Activity 9 (A) : AB^2 , BC^2 , AC^2 , 10 cm.

Activity 9 (B) : $\angle FDE$, 65, 5, $\angle FDG$, 35, 7.

Activity 10 (A) : 180° , 40° , 220° , 110° .

Activity 10 (B) : $\frac{2}{3}$, $\frac{2}{3}$, $\frac{3}{2}$, 9, 9, 3.

Chapter 6 :

Activity 11 (A) : BM, QM, BM, QM.

Activity 11 (B) : PQ, 24, 12, 13, OM, 5 cm.

Activity 12 (A) : Radii of the same circle

Hypotenuse side test

Perpendicular drawn from the centre of the circle to the chord bisects the chord.

CD.

Activity 12 (B) : AB, 16 cm, 8, 8^2 , 289, 17 cm.

Chapter 7 :

Activity 13 (A) : $(0, 4)$, $y=3$, 3.

Activity 13 (B) : -1, $(0, -1)$, 0, 1, 0, 3, 3, 2.

Activity 14 (A) : 3, 3, $y=3$, No.

Chapter 8 :

Activity 15 (A) : AB, x , $2x$, $\frac{1}{2}$.

Activity 15 (B) : 70, 60, 50, 45, 80, 63.

Activity 16 (A) : $\boxed{1}$, $\boxed{\frac{1}{\sqrt{2}}}$, $\boxed{\frac{1}{2}}$, $\boxed{1}$.

Activity 16 (B) : $\boxed{\frac{LM}{LN}}$, $\boxed{\frac{LM}{LN}}$, $\boxed{\frac{MN}{LM}}$, $\boxed{\frac{LM}{MN}}$, $\boxed{\frac{MN}{LN}}$, $\boxed{\frac{MN}{LN}}$.

Chapter 9 :

Activity 17 (A) : $\boxed{7.5 \text{ cm}}$, $\boxed{l^3}$, $\boxed{7.5}$, $\boxed{421.875}$.

Activity 17 (B) : $\boxed{\frac{1}{3} \pi r h^2}$, $\boxed{753.60}$, $\boxed{12}$, $\boxed{3}$, $\boxed{3.14}$, $\boxed{5}$.

Activity 18 (A) : $\boxed{4\pi r^2}$, $\boxed{4 \times 3.14}$, $\boxed{225}$, $\boxed{15}$.

Activity 18 (B) : $\boxed{4l^2}$, $\boxed{4.5}$, $\boxed{81}$, $\boxed{6l^2}$, $\boxed{4.5}$, $\boxed{121.50}$.

SECTION 2 : MULTIPLE CHOICE QUESTION TESTS

Subject	Question No.	1	2	3	4	5	6	7	8	9	10
Mathematics Part-I	Test 1	(D)	(D)	(A)	(B)	(A)	(D)	(C)	(B)	(A)	(D)
	Test 2	(B)	(A)	(C)	(A)	(A)	(C)	(C)	(D)	(D)	(C)
	Test 3	(A)	(D)	(B)	(C)	(C)	(D)	(A)	(C)	(A)	(B)
Mathematics Part-II	Test 1	(C)	(C)	(B)	(A)	(D)	(D)	(B)	(A)	(A)	(A)
	Test 2	(A)	(B)	(B)	(A)	(B)	(B)	(B)	(C)	(B)	(C)
	Test 3	(B)	(C)	(A)	(C)	(A)	(C)	(A)	(A)	(A)	(C)

SECTION 3 : PRACTICALS

Answers to Test your knowledge

MATHEMATICS PART-I

PRACTICAL 1 :

(i), (ii), (iii) and (iv) all the sets are subsets of U.

PRACTICAL 2 :

(1) $\sqrt{3}$ is to the right side of $-\sqrt{3}$.

(2) Two points. (One to the right of origin and the second to the left of the origin).

PRACTICAL 3 :

$p(x)$, $(x-a)$, $p(a)$.

PRACTICAL 5 :

(1) As per table 1, Miss Vishakha will not have to pay income tax.

(2) As per table 2, Mr Girish will have to pay income tax. (Income is more than exemption amount)

(3) As per table 3, Mr Kher will not have to pay income tax.

MATHEMATICS PART-II

PRACTICAL 1 :

(1) Coordinate.

(2) Distance between the two points on the number line is calculated using the formula : Greater coordinate – smaller coordinate.

PRACTICAL 2 :

(1) When two parallel lines are intersected by a transversal, four pairs of corresponding angles are formed.

(2) When two parallel lines are intersected by a transversal, the measures of corresponding angles are equal.

(3) When two parallel lines are intersected by a transversal, the pair of interior angles are supplementary.

(4) 100° .

PRACTICAL 3 :

(1) If two parallel lines are intersected by a transversal, then two pairs of alternate interior angles and two pairs of alternate exterior angles are formed.

(2) Those coplanar lines are not parallel.

PRACTICAL 4 :

(1) Equilateral triangle.

(2) Isosceles triangle.

(3) If two sides of a triangle are congruent then the angles opposite to them are congruent.

(4) Yes, applicable.

(5) Since a scalene triangle has all sides of different measures, the angle opposite to the greater side will be greater and the angle opposite to smaller side will be smaller.

PRACTICAL 5 :

(1) The segment joining the vertex of a triangle to the midpoint of its opposite side is called a median.

(2) A triangle can have 3 medians.

(3) In a right angled triangle, the length of the median on the hypotenuse is half the length of the hypotenuse.

(4) The circumcentre of right angled triangle lies on the hypotenuse; in fact it is the midpoint of the hypotenuse.

(5) Length of the median to the hypotenuse
= radius of circumcircle = $\frac{1}{2} \times \text{hypotenuse}$
 $= \frac{1}{2} \times 11 = 5.5 \text{ cm}$

PRACTICAL 6 :

(1) The figures which are of the same shape but may be of different sizes are called similar figures.

(2) The proportionality of all sides of the objects is an important aspect of similarity covered with

the map of the room made on the graph paper.

- (3) Yes, they help in studying, analysing and working on the data which can be helpful in many ways.

PRACTICAL 7 :

- (1) Area is a quantity that determines the size of any region.
- (2) The circumference of a circle is calculated using the formula $2\pi r$ or πd .

- (3) The area of the circle is calculated using the formula πr^2 .

- (4) $\pi = \frac{22}{7}$ or $\pi = 3.14$ are the values of π which are basically used for calculation purposes.

PRACTICAL 8 :

- (1) Volume of an object is the space occupied by the object.
- (2) The volume of a cylinder is calculated using the formula $\pi r^2 h$.

