

## HOLIDAY HOME WORK

### CLASS VIII

1. Sum of two numbers is 95. If one exceeds the other by 15, find the numbers.
2. Two numbers are in the ratio 5:3. If they differ by 18, what are the numbers?
3. Three consecutive integers add up to 51. What are these integers?
4. The sum of three consecutive multiples of 8 is 888. Find the multiples.
5. Three consecutive integers are such that when they are taken in increasing order and multiplied by 2, 3 and 4 respectively, they add up to 74. Find these numbers.
6. The ages of Rahul and Haroon are in the ratio 5:7. Four years later the sum of their ages will be 56 years. What are their present ages?
7. The number of boys and girls in a class are in the ratio 7:5. The number of boys is 8 more than the number of girls. What is the total class strength?
- 8 There is a narrow rectangular plot, reserved for a school, in Mahuli village. The length and breadth of the plot are in the ratio 11:4. At the rate Rs100 per metre it will cost the village panchayat Rs 75000 to fence the plot. What are the dimensions of the plot?
- 9 The list price of a frock is Rs 220. A discount of 20% is announced on sales. What is the amount of discount on it and its sale price.
- 10 Find selling price (SP) if a profit of 5% is made on
  - (a) a cycle of Rs 700 with Rs 50 as overhead charges.
  - (b) a lawn mower bought at Rs 1150 with Rs 50 as transportation charges.
  - (c) a fan bought for Rs 560 and expenses of Rs 40 made on its repairs.

## CLASS IX

- 1 In Fig. 6.10, ray OS stands on a line POQ. Ray OR and ray OT are angle bisectors of  $\angle POS$  and  $\angle SOQ$ , respectively. If  $\angle POS = x$ , find  $\angle ROT$ .
- 2 In Fig. 6.11, OP, OQ, OR and OS are four rays. Prove that  $\angle POQ + \angle QOR + \angle SOR + \angle POS = 360^\circ$ .
- 3 In Fig. 6.15,  $\angle PQR = \angle PRQ$ , then prove that  $\angle PQS = \angle PRT$ .
- 4 If a transversal intersects two lines such that the bisectors of a pair of corresponding angles are parallel, then prove that the two lines are parallel.
- 5 In Fig. 6.27,  $AB \parallel CD$  and  $CD \parallel EF$ . Also  $EA \perp AB$ . If  $\angle BEF = 55^\circ$ , find the values of  $x$ ,  $y$  and  $z$ .
- 6 In Fig. 6.38, the sides AB and AC of  $\triangle ABC$  are produced to points E and D respectively. If bisectors BO and CO of  $\angle CBE$  and  $\angle BCD$  respectively meet at point O, then prove that  $\angle BOC = 90^\circ - \frac{1}{2} \angle BAC$ .
- 7 D is a point on side BC of  $\triangle ABC$  such that  $AD = AC$  (see Fig. 7.47). Show that  $AB > AD$ .
- 8 Two parallel lines  $l$  and  $m$  are intersected by a transversal  $p$  (see Fig. 8.15). Show that the quadrilateral formed by the bisectors of interior angles is a rectangle.
- 9 Show that the bisectors of angles of a parallelogram form a rectangle.
- 10 Show that the line segments joining the mid-points of the opposite sides of a quadrilateral bisect each other.

## CLASS VI A

1 Find HCF and LCM

i 24 and 36 ii 8 and 12 iii 15, 25 and 30 iv 12, 16 and 28

2 Find LCM OF 12, 16, 24 and 36 leaves remainder 7 in each case.

3 compare  $\frac{5}{6}$  and  $\frac{13}{15}$

4 Write the prime numbers less than 100

5 Draw five other situations of one-fourth, half and three-fourth revolution on a clock.

6 Draw any polygon and shade its interior.

7 Write all the factors of 68.

8 A number is divisible by both 5 and 12. By which other number will that number be always divisible?

9 Find all the prime factors of 1729 and arrange them in ascending order. Now state the relation, if any; between two consecutive prime factors.

The length, breadth and height of a room are 825 cm, 675 cm and 450 cm respectively.

Find the longest tape which can measure the three dimensions of the room exactly.

10. Determine the smallest 3-digit number which is exactly divisible by 6, 8 and 12.

11. Determine the greatest 3-digit number exactly divisible by 8, 10 and 12.

## CLASS VI B

1 Find the HCF of the following:

(i) 24 and 36 (ii) 15, 25 and 30

(iii) 8 and 12 (iv) 12, 16 and 28

2 Find : i  $25 \times 8358 \times 4$  ; ii  $625 \times 3759 \times 8$

3 Arrange the following numbers in ascending order :

(a) 847, 9754, 8320, 571 (b) 9801, 25751, 36501, 38802

4 Arrange the following numbers in descending order :

(a) 5000, 7500, 85400, 7861 (b) 1971, 45321, 88715, 92547

Make ten such examples of ascending/descending order and solve them.

5 : Find the factors of 36.

6 Find the sum of :

(a) 137 and  $-354$  (b)  $-52$  and 52

(c)  $-312$ , 39 and 192 (d)  $-50$ ,  $-200$  and 300

7 Mark  $-3$ , 7,  $-4$ ,  $-8$ ,  $-1$  and  $-3$  on the number line.