

## REVISION SHEET CH 03 X

- Q1.** Places A and B are 100 km apart on a highway. One car starts from A and another from B at the same time. If the cars travel in the same direction at different speeds; they meet in 5 hours. If they travel towards each other, they meet in 1 hour. What are the speeds of the two cars?
- Q2.** In a class test, the sum of the marks obtained by P in Mathematics and Science is 28. Had he got 3 more marks in Mathematics and 4 marks less in Science, the product of marks obtained in the two subjects would have been 180. Find the marks obtained in the two subjects separately.
- Q3.** Three years ago, Rashmi was thrice as old as Nazma. Ten years later, Rashmi will be twice as old as Nazma. How old are Rashmi and Nazma now?
- Q4.** Represent the following system of linear equations graphically. From the graph, find the points where the lines intersect y-axis:  
 $3x + y - 5 = 0$ ;  $2x - y - 5 = 0$
- Q5.** Two numbers are in the ratio 5 : 6. If 7 is subtracted from each of the numbers, the ratio becomes 4 : 5. Find the numbers?
- Q6.** Jaya scored 40 marks in a test getting 3 marks for each correct answer and losing 1 mark for each incorrect answer. Had 4 marks being awarded for each correct answer and 2 marks were deducted for each incorrect answer then Jaya again would have scored 40 marks. How many questions were there in the Test?
- Q7.** The sum of the digits of a 2-digit number is 14. The number obtained by interchanging its digits exceeds the given number by 18. Find the number.
- Q8.** Half of the difference between two numbers is 2. The sum of the greater number and twice the smaller number is 13. Find the numbers.
- Q9.** A part of monthly hostel charges in a college hostel are fixed and the remaining depends on the number of days one has taken food in the mess. When a student A takes food for 25 days, he has to pay Rs. 4,500, whereas a student B who takes food for 30 days, has to pay Rs. 5,200. Find the fixed charges per month and the cost of food per day.
- Q10.** If  $2x + y = 23$  and  $4x - y = 19$ , find the value of  $(5y - 2x)$  and  $\left(\frac{y}{x} - 2\right)$
- Q11.** A fraction becomes  $\frac{1}{3}$  when 2 is subtracted from the numerator and it becomes  $\frac{1}{2}$  when 1 is subtracted from the denominator. Find the fraction.
- Q12.** A father's age is three times the sum of the ages of his two children. After 5 years his age will be two times the sum of their ages. Find the present age of the father.
- Q13.** Solve the pair of equations:  
 $\frac{2}{x} + \frac{3}{y} = 11$ ,  $\frac{5}{x} + \frac{4}{y} = -7$   
Hence, find the value of  $5x - 3y$ .
- Q14.** Solve for x and y:  
 $(a - b)x + (a + b)y = a^2 - 2ab - b^2$   
 $(a + b)(x + y) = a^2 + b^2$
- Q15.** Solve the following systems of equations:  
 $\frac{x+y}{xy} = 2$ ,  
 $\frac{x-y}{xy} = 6$ .
- Q16.** Half the perimeter of a rectangle garden, whose length is 4m more than its width, is 36m. Find the dimensions of the garden.
- Q17.** A shopkeeper gives books on rent for reading. She takes a fixed charge for the first two days, and an additional charge for each day thereafter. Latika paid ₹ 22 for a book kept for 6 days, while Anand paid ₹ 16 for the book kept for four days. Find the fixed charges and charge for each extra.
- Q18.** Solve  $2x + 3y = 11$  and  $2x - 4y = -24$  and hence find the value of 'm' for which  $y = mx + 3$ .
- Q19.** In a competitive examination, one mark is awarded for each correct answer while  $\frac{1}{2}$  mark is deducted for every wrong answer. Jayanti answered 120 questions and got 90 marks. How many questions did she answer correctly?
- Q20.** The total cost of a certain length of a piece of cloth is ₹ 200. If the piece was 5 m longer and each metre of cloth costs ₹ 2 less, the cost of the piece would have remained unchanged. How long is the piece and what is its original rate per metre?