

CLASS 8 – MATHEMATICS  
CHAPTER 2  
LINEAR EQUATIONS IN ONE VARIABLE

**WORK SHEET 3 of 4**

Solve the following equations (from 1 to 6) and check your results.

1)  $3x = 2x + 18$

2)  $5t - 3 = 3t - 5$

3)  $8x + 4 = 3(x - 1) + 7$

4)  $x = \frac{4}{5}(x + 10)$

5)  $\frac{2x}{3} + 1 = \frac{7x}{15} + 3$

6)  $3m = 5m - \frac{8}{5}$

- 7) A positive number is 5 times another number. If 21 is added to both the numbers, then one of the new numbers becomes twice the other new number. What are the numbers?
- 8) Sum of the digits of a two-digit number is 9. When we interchange the digits, it is found that the resulting new number is greater than the original number by 27. What is the two-digit number?
- 9) One of the two digits of a two digit number is three times the other digit. If you interchange the digits of this two-digit number and add the resulting number to the original number, you get 88. What is the original number?
- 10) Shobo's mother's present age is six times Shobo's present age. Shobo's age five years from now will be one third of his mother's present age. What are their present ages?
- 11) 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 Rs 100 per metre it will cost the village panchayat Rs 75000 to fence the plot. What are the dimensions of the plot?
- 12) Aman's age is three times his son's age. Ten years ago he was five times his son's age. Find their present ages.

**Multiple Choice Questions**

*In questions 13 to 15 out of the four options only one is correct, write the correct answer.*

13) The solution of which of the following equations is neither a fraction nor an integer.

(a)  $3x + 2 = 5x + 2$

(b)  $4x - 18 = 2$

(c)  $4x + 7 = x + 2$

(d)  $5x - 8 = x + 4$

14) The digit in the tens place of a two digit number is 3 more than the digit in the units place. Let the digit at units place be  $b$ . Then the number is

(a)  $11b + 30$

(b)  $10b + 30$

(c)  $11b + 3$

(d)  $10b + 3$

15) If  $8x - 3 = 25 + 17x$ , then  $x$  is

(a) a fraction

(b) an integer

(c) a rational number

(d) cannot be solved

**Fill in the blanks**

*In questions 16 to 18, fill in the blanks to make each statement true.*

16) The solution of the equation  $3x - 4 = 1 - 2x$  is \_\_\_\_\_.

17) The denominator of a rational number is greater than the numerator by 10.

If the numerator is increased by 1 and the denominator is decreased by 1, then expression for new denominator is \_\_\_\_\_.

18) In a 2 digit number, the units place digit is  $x$ . If the sum of digits be 9, then the number is \_\_\_\_\_.

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