

CLASS VII – MATHEMATICS – CHAPTER 04

SIMPLE EQUATIONS

Name:

Date:

- 01.** Write the equation for 'The sum of three times x and 11 is 32'.
- (a). $3x + 11 = 32$ (b). $x + 11 = 32$ (c). $3x = 32$ (d). $x + 11 = 3$
- 02.** Raman's father's age is 5 years more than three times Raman's age. Raman's father is 44 years old. Set up an equation to find Raman's age.
- (a). $x + 3 = 44$ (b). $3x + 5 = 44$ (c). $x + 5 = 44$ (d). $3x - 5 = 44$
- 03.** What is n in $3n + 7 = 25$?
- (a). 7 (b). 5 (c). 6 (d). 8
- 04.** What is l in $3l = 42$?
- (a). 2 (b). 14 (c). 18 (d). 12
- 05.** Write the equation for 'If you subtract 5 from 6 times a number, you get 7'.
- (a). $6x - 5 = 7$ (b). $x - 5 = 7$ (c). $6x = 7$ (d). $x - 5 = 4$
- 06.** A shopkeeper sells mangoes in two types of boxes, one small and one large. A large box contains as many as 8 small boxes plus 4 loose mangoes. Set up an equation which gives the number of mangoes in each small box. The number of mangoes in a large box is given to be 100.
- (a). $8m = 100$ (b). $8m + 4 = 100$ (c). $m + 4 = 100$ (d). $8m - 4 = 100$
- 07.** What is p in $2p - 1 = 23$?
- (a). 14 (b). 13 (c). 12 (d). 11
- 08.** What is y in $8y = 36$?
- (a). 2 (b). 4 (c). 12 (d). $9/2$
- 09.** Write the equation for 'The number x is greater by 5 than 9'.
- (a). $x - 5 = 9$ (b). $x + 5 = 9$ (c). $5x = 9$ (d). $x + 9 = 5$
- 10.** Irfan says that he has 7 marbles more than five times the marbles Parmit has. Irfan has 37 marbles. (Take m to be the number of Parmit's marbles.) Set up an equation.
- (a). $5m = 37$ (b). $5m + 7 = 37$ (c). $m + 5 = 37$ (d). $m + 7 = 37$
- 11.** What is x in $4x + 5 = 65$?
- (a). 13 (b). 14 (c). 15 (d). 16
- 12.** What is b in $b/2 = 6$?
- (a). 4 (b). 8 (c). 3 (d). 12
- 13.** Write the equation for 'One third of a number plus 5 is 8.
- (a). $(n/3)+5 = 8$ (b). $(n/2) +5 = 8$ (c). $(n/5) + 3 = 8$ (d). $(n/3) - 5 = 8$
- 14.** Laxmi's father is 49 years old. He is 4 years older than three times Laxmi's age. Take Laxmi's age to be y years.) Set up an equation.
- (a). $3y = 49$ (b). $3y + 4 = 49$ (c). $y + 4 = 49$ (d). $3y - 4 = 49$

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15. What is y in $10y - 20 = 50$?
(a). 9 (b). 8 (c). 7 (d). 6
16. What is x in $(x/3) = (5/4)$?
(a). 20 (b). $12/5$ (c). 5 (d). $15/4$
17. Write the equation for 'The sum of two times y and 10 is 42'.
(a). $2y + 10 = 42$ (b). $y + 10 = 42$ (c). $2x = 42$ (d). $y + 11 = 3$
18. In an isosceles triangle, the vertex angle is twice either base angle. (Let the base angle be b in degrees. Remember that the sum of angles of a triangle is 180 degrees). Set up an equation.
(a). $x + 2x = 180$ (b). $x + 2x + 2x = 180$ (c). $4x = 180$ (d). $3x = 180$
19. What is n in $3n - 2 = 46$?
(a). 14 (b). 15 (c). 16 (d). 17
20. What is n in $(n/5) = (7/15)$?
(a). $3/7$ (b). $75/7$ (c). 21 (d). $7/3$

Q01. Fill in the blanks:

- (a). An _____ is a condition on a variable.
- (b). In Equation $4x + 5 = 65$, the _____ is $(4x + 5)$.
- (c). If we add the same number to both sides of a balance equation, the balance is _____.
- (d). A _____ takes on different numerical values; its value is not fixed.
- (e). In Equation $4x + 5 = 65$, the _____ is 65.
- (f). If we subtract the same number from both sides of a balance equation, the balance is _____.
- (g). In an equation there is always an _____ sign.
- (h). In Equation $6x + 7 = 19$, the L.H.S. is _____.
- (i). In Equation $3x + 4 = 25$, the _____ is $(3x + 4)$.
- (j). If we multiply both sides of the equation by the same number, the balance is _____.
- (k). The _____ of an expression thus formed depends upon the chosen value of the variable.
- (l). In Equation $3x + 4 = 25$, the _____ is 25.
- (m). If we divide both sides of the equation by the same number, the balance is _____.
- (n). If we fail to do the same mathematical operation on both sides of a balanced equation, the balance is _____.

Q02. Solve the following equations:

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|--------------------|-----------------------|--------------------------|--------------------------|
| (a). $10p = 100$ | (b). $10p + 10 = 100$ | (c). $4(m + 3) = 18$ | (d). $-2(x + 3) = 5$ |
| (e). $p/4 = 5$ | (f). $-p/3 = 5$ | (g). $2(x + 4) = 12$ | (h). $3(n - 5) = 21$ |
| (i). $3p/4 = 6$ | (j). $3s = -9$ | (k). $3(n - 5) = -21$ | (l). $3 - 2(2 - y) = 7$ |
| (m). $3s + 12 = 0$ | (n). $3s = 0$ | (o). $-4(2 - x) = 9$ | (p). $4(2 - x) = 9$ |
| (q). $2q + 6 = 0$ | (r). $2p + 6 = 12$ | (s). $4 + 5(p - 1) = 34$ | (t). $34 - 5(p - 1) = 4$ |

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- Q01.** Find a number, such that one fourth of the number is **3** more than **7**.
- Q02.** The sum of three times a number and 11 is 32. Find the number.
- Q03.** Raju's father's age is 5 years more than three times Raju's age. Find Raju's age, if his father is 44 years old.
- Q04.** Maya, Madhura and Mona are friends studying in the same class. In a class test in geography, Maya got 16 out of 25. Madhura got 20. Their average score was 19. How much did Mona score?
- Q05.** Sachin scored twice as many runs as Rahul. Together, their runs fell two short of a double century. How many runs did each one score?
- Q06.** In a school, the number of girls is 50 more than the number of boys. The total number of students is 10
- Q07.** Find the number of girls.
- Q08.** Two times a number increased by 5 equals 9. Find the number.
- Q09.** 9 added to twice a number gives 13. Find the number.
- Q10.** 1 subtracted from one-third of a number gives 1. Find the number.
- Q11.** After 25 years, Rama will be 5 times as old as he is now. Find his present age.
- Q12.** After 20 years, Manoj will be 5 times as old as he is now. Find his present age.
- Q13.** My younger sister's age today is 3 times, what it will be 3 years from now minus 3 times what her age was 3 years ago. Find her present age.
- Q14.** If 45 is added to half a number, the result is triple the number. Find the number.
- Q15.** In a family, the consumption of wheat is 4 times that of rice. The total consumption of the two cereals is 80 kg. Find the quantities of rice and wheat consumed in the family.
- Q16.** In a bag, the number of one-rupee coins is three times the number of two rupees coins. If the worth of the coins is Rs120, find the number of 1 rupee coins.
- Q17.** The sum of two consecutive multiples of 2 is 18. Find the numbers.
- Q18.** Two complementary angles differ by 20° . Find the angles.
- Q19.** 150 has been divided into two parts such that twice the first part is equal to the second part. Find the parts.
- Q20.** In a class of 60 students, the number of girls is one third the number of boys. Find the number of girls and boys in the class.
- Q21.** Two-third of a number is greater than one-third of the number by 3. Find the number.
- Q22.** A number is as much greater than 27 as it is less than 73. Find the number.
- Q23.** A man travelled two fifth of his journey by train, one-third by bus, one-fourth by car and the remaining 3 km on foot. What is the length of his total journey?
- Q24.** Twice a number added to half of itself equals 24. Find the number.
- Q25.** Thrice a number decreased by 5 exceeds twice the number by 1. Find the number.