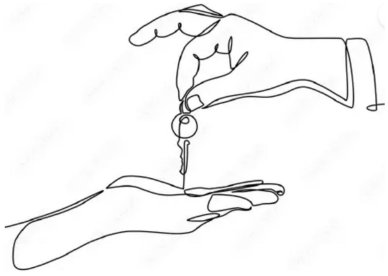
INDIAN SCHOOL NIZWA - WORKSHEET

Chapter 2 Linear Equations in one variable

Name: Class :VIII Sec:

1. Solve: $\frac{p}{9} - \frac{1}{6}\left(p - \frac{1}{3}\right) = \frac{1}{2}(p + 1) + \frac{1}{18}$
2. Solve: $m - \frac{m-1}{2} = 1 - \frac{m-2}{3}$
3. Solve: $x + \frac{2x}{3} + \frac{x}{7} = 95 - \frac{x}{2}$
4. Solve: $7(6b - 4) - 6(5b - 1) = 2(b - 8) - 4(3b + 2)$
5. Find the solution of the equation: $\frac{18}{5}t - 3 = 5t - 4$
6. Find the value of x: $13x + \frac{25}{4} = 3x$.
7. If $\frac{5x}{2} = 7 - \frac{3x}{5}$, then find the numerical value of $31x - 7$.
8. Akhil's office in a high-rise building was on a floor that had as many floors above it as below. One day he went up 7 floors from his office, then down 4 floors and finally up 9 floors. He was at the top floor now. How many floors did the building have in total?
9. If $\frac{2x}{5} - 3 = 7 - \frac{3x}{5} + \frac{1}{4}$, then find x.
10. If $\frac{5x}{3} - 4 = \frac{2x}{5}$, then find the numerical value of $19x - 7$
11. The sum of the two numbers is 95. If one exceeds the other by 15, find the numbers.
12. The sum of two numbers is 11 and their difference is 5. Find the numbers.
13. In a students' hostel, one third of the total number of girls and four more take vegetarian food only, one fourth and three more take non-vegetarian food only. The other 103 take both vegetarian and non-vegetarian food. How many girls are there in the hostel?
14. The sum of 5 consecutive numbers is 140. Find the numbers.
15. Solve:
    (i) $\frac{2x}{3} - \frac{3x}{8} = \frac{7}{12}$
    (ii) $\frac{x}{2} - \frac{4}{5} + \frac{x}{5} + \frac{3x}{10} = \frac{1}{5}$
16. Solve:
    (i) $\frac{(1-9y)}{(19-3y)} = \frac{5}{8}$
    (ii) $\frac{(2-y)}{(y+7)} = \frac{3}{5}$
    (iii) $\frac{(2x-1)}{3} - \frac{(6x-2)}{5} = \frac{1}{3}$
17. Solve: $\frac{2y-3}{8} - \frac{3}{4} = \frac{3y-5}{2} + y$
18. Solve: $0.25(4f - 3) = 0.05(10f - 9)$
19. CASE STUDY

    Anima left one-half of her property to her daughter, one-third to her son and donated the rest to an educational institute. If the donation was worth ₹1,00,000.Based on the above situation, answer the following questions



(i) Write the linear equation formed in the above situation.
(ii) How much money did Anima have?
(iii) How much money educational institute have?
(iv) How much money did Anima‘s son and daughter have?

20. CASE STUDY

It is common that government revises fares from time to time based on various factors such as taxes, economy and inflation, for various vehicles like auto-rickshaw, taxis and radio cab etc. The auto and taxi charge in a city comprise of fixed charge and the charge for the distance covered. Answer the following questions based on the above information.

(i) If the fixed charge in a city is ₹x, charge per km is ₹5 and the total fare is ₹60 ,then find the linear equation for the journey of 10 km.
(ii) What is the value of the fixed charge?
(iii) If in a city a person has to pay ₹110 for a journey of 15 km and fixed charge is ₹20 then what is the charge per km?
(iv) If in a city fixed charge is double of the charge per km (y) and a person paid ₹75 for a journey of 1 km, then find the linear equation for the following situation.
(v)According to the given equation: $2z + 17 = 85$, if ₹17 is the fixed charge and the total fare is ₹85 for a journey of 2km then what is the charge per km (z)?

21. Revision

1. Convert 17.38 as a fraction in reduced form.
2. Express $25\frac{1}{25}$ as a decimal.
3. Find the value of: 300001-199828
4. Divide: 1.768 by 1.6
5. $20\frac{3}{4} \times$ _____ $= 15\frac{1}{2}$