One-Step Equations Worksheet

One-Step Equations and Inverse Operations

Multiple Choice Questions.

For each question, four alternative choices are given, of which only one is correct. You have to select the correct alternative and mark it in the appropriate option.

1. If $\frac{1}{4}$th of Harry's salary is $240, what is Harry's salary?
   (a) 960
   (b) 600
   (c) 1200
   (d) 800
2. In a basket containing strawberries $\frac{1}{6}$ of strawberries are damaged. If the good ones weigh 15 lb. What is the total no. of strawberries in the basket?
   (a) 18 lbs
   (b) 16 lbs
   (c) 15 lbs
   (d) 14 lbs
3. If $\frac{1}{z} = \frac{2}{3}$ then 'z' is _____.
   (a) $\frac{1}{6}$
   (b) $\frac{2}{3}$
   (c) 6
   (d) $\frac{3}{2}$
4. Find the number which when increased by 10 times of itself becomes 220.
   (a) 11
   (b) 22
   (c) 20
   (d) 25
5. Find 'x' if $\frac{3}{(x-1)} = 2$.
   (a) $\frac{8}{5}$
   (b) $\frac{25}{9}$
   (c) $\frac{5}{2}$
   (d) $\frac{47}{7}$

6. If $x = 3 - 9x$, then 'x' has the value _____.

   (a) $\frac{3}{8}$

   (b) -3

   (c) $\frac{3}{10}$

   (d) $\frac{8}{3}$

7. Solve for 'x': $2x - 1 = 3$.

   (a) 0
   (b) -1
   (c) 1
   (d) 2

8. If a cyclist bikes 15 kilometers in 2.5 hours, what is his speed?

   (a) 2 km/hr
   (b) 6 km/hr
   (c) 8 km/hr
   (d) 10 km/hr

9. $\frac{2}{3}$ of a number is 5. What is the number?

   (a) $\frac{10}{3}$

   (b) 7.5

   (c) $\frac{5}{3}$

   (d) 2.5

10. $\frac{2}{3}$ of a number is 16. What is $\frac{1}{5}$ of that number?

    (a) 5.8
    (b) 6.7
    (c) 2.5
    (d) 4.8

True or False Questions.

Indicate True or False for the following Statements

11. If $y = \frac{1}{2}$, the the value of $(4y - 1)/3$ is $\frac{1}{3}$. (True/False)
12. The value of 'm' in the equation $15m = 5(m - 1)$ is $\frac{1}{2}$. (True/False)
13. In the equation $\frac{30}{x} = 5$, 'x' is equal to 5. (True/False)
14. If $3y = 2y - 1$, then 'y' is -1. (True/False)
15. If $\left(\frac{1}{m-1}\right) = 1$ then m=2. (True/False)
16. A motorist driving at a speed of 'v' km/hr covers a distance of 120 km in $\frac{21}{2}$ hrs. The speed of the car is 48 km/hr. (True/False)

17. Sam spends \$1200 on education, which is $\frac{3}{8}$th of his salary. His salary is \$ 4,500. (True/False)
18. If $\left(\frac{1}{m-1}\right) = 1$, then 'm' = 2. (True/False)
19. If $2(a-3) = 3(a+2)$, then $a = 6$. (True/False)
20. The value of 't' is 8, if $3t+4 = -11$. (True/False)

Applications of One-Step Equations

Multiple Choice Questions.

For each question, four alternative choices are given, of which only one is correct. You have to select the correct alternative and mark it in the appropriate option.

1. A train 'A' travelling at 60 miles per hour reaches station 'S', 450 miles from the origin, in 'h' hours. Another train 'B' starts at the same time from another station which is 525 miles from station 'S'. At what speed should train 'B' travel so that both trains reach the station at the same time?
   (a) 65 m/h
   (b) 70 m/h
   (c) 75 m/h
   (d) 90 m/h
2. Rocky had an acre (4840 sq. yards) of land. After cutting 'N' number of plots of 640 sq. yards each, he was left with 360 sq. yards land. How many plots of 640 sq. yards were cut?
   (a) 6 plots
   (b) 7 plots
   (c) 10 plots
   (d) 5 plots
3. A carpenter charges \$445 for a job. If he charges \$35 for every hour of work done, how many hours did he work?
   (a) 1.75h
   (b) 12.71h
   (c) 2.75h
   (d) 3.5h
4. The cost of a pen is 3 times the cost of a pencil and cost of a notebook is 4 times that of a pen. If the cost of 6 pencils, 2 pens, and one notebook is \$18, what is the cost of one pen?
   (a) 4.45
   (b) 3.54
   (c) 2.25
   (d) 1.25
5. One pizza costs 3 times as much as a soda. If the price of one pizza and a soda is \$5, what is the cost of one pizza?
   (a) 2.25
   (b) 2.75
   (c) 3.5
   (d) 3.75
6. After driving 175 miles in the plains, a car travels up a hill at 28 miles/hr. If the total distance covered in the plains and the hills was 273 miles, how much time was taken by the journey in the hills?
   (a) 2 hrs
   (b) 5 hrs

(c) 3.5 hrs
(d) 2.5 hrs

7. $\frac{1}{8}$th of the population of a small town shifted to the city where a new industry was set up. If the population left behind in the town was 23100 after the shift, the number of persons shifted to the city was _____.

   (a) 2900
   (b) 2030
   (c) 3300
   (d) 3100

8. Martha made a purchase for $70.20 including 8% sales tax. What was the total before tax?

   (a) 62.2
   (b) 64.5
   (c) 65
   (d) 68

9. A woolen shirt costs $25 more than a cotton shirt. If 3 cotton shirts and one woolen shirt cost $145, what is the cost of one woolen shirt?

   (a) 60
   (b) 55
   (c) 50
   (d) 75

10. A farmer cultivates $\frac{1}{4}$th of his land and the remaining 1350 sq yards of land is unused. He decides to sell $\frac{1}{3}$rd of his total land (both cultivated and unused). How much land will he be left with after the sale?

    (a) 1100 sq yard
    (b) 1500 sq yard
    (c) 1600 sq yard
    (d) 1200 sq yard

True or False Questions.

Indicate True or False for the following Statements

11. If A's share of money is twice the share of B and the total amount they receive is $90, then the amount of money received by A is $60 and B is $30. (True/False)
12. The value of 100 degrees Fahrenheit on the Kelvin scale is 210.8 K. (True/False)
13. If a carpenter charges $10 an hour and he works for 8 hours, it means that he earns $80 in a day. (True/False)
14. Cyclist 'X' covers 12 miles in 2.5 hours. Cyclist 'Y' covers 13.5 miles in 3 hours. Cyclist 'Y' is faster. (True/False)
15. 16 adults and 10 children traveled to the zoo in a bus. The cost of a child's ticket was half that of the adult's ticket. If the total cost of tickets was $252, the cost of a child's ticket is $6. (True/False)
16. If Samuel sold a watch for $102 and lost $155, he bought the watch for $132. (True/False)
17. Lucy has 186 marbles, 24 more than 36% of the total marbles in the jar. There are 450 marbles in the jar. (True/False)
18. The total cost of 4 ice cream cones and 8 sandwiches is $36. If the cost of one sandwich is $2.75, the cost of one ice cream is $4.5. (True/False)
19. Betsy saves $\frac{1}{5}$ of her monthly pocket money for charity. If she saves $96 in one year then her monthly pocket money is $40. (True/False)
20. 1 red candle costs five cents more than a white candle. If the cost of 10 white candles and 8 red candles is $4, then the following equation justifies the relation 'x' cents being the cost of one white candle: $10x+8(x+5)=1$. (True/False)