

1. Set up equations and solve them to find the unknown numbers in the following cases:

(a) Add 18 to four times  $y$  gives 32.

(b)  $\frac{5}{2}$  times of  $x$  gives  $\frac{25}{4}$ .

(c) 18 added to 6 times of  $z$  gives -2.

(d) Taking away 6 from 6 times  $y$  gives 120.

(e) Adding 3 to one-third of  $z$  gives 30.

2. Solve the following equations:

(a)  $2(x + 8) = 12$

(b)  $3(y - 15) = -27$

(c)  $\frac{3y}{10} = -6$

(d)  $7y + 29 = -6$

(e)  $4 + 5(p - 1) = 34$

(f)  $0 = 16 + 6(m - 9)$

3. Construct three equations with  $x = -5$ .

4. If 5 is added to twice a number, the result is 29. Find the number.

5. The sum of two natural numbers is 117. If one number is twelve times the other, find the two numbers.

6. Ajay's father is 4 times as old as he is. After twenty years, his age will be twice that of Ajay's age. Find their present ages.

7. The length of a rectangle is 17 cm more than its breadth. Its perimeter is 134 cm. Find the length and breadth.

8. Solve the following equations and check the answers.

(a)  $\frac{5z + 1}{3} = 7$

(b)  $\frac{5x}{3} + 3 = x + 7$

9. A number is divided by 2 and then increased by 5 gives 9. Find the number.

10. Put  $<$ ,  $>$  or  $=$  sign in the blanks.

(a) If  $6x = 18$  then  $6x - 10$  \_\_\_\_  $18 - 10$ .

(b) If  $3y + 5 = 20$  then  $3y + 5 + 20$  \_\_\_\_  $20 + 15$

(c) If  $10t - 2 = 18$  then  $10t - 2$  \_\_\_\_  $\frac{18}{5}$

(d) If  $12a - 4 = 3a + 14$  then  $12a - 4$  \_\_\_\_  $\frac{3a + 14}{6}$

(e) If  $20x = 100 - 5x$  then  $4 \times 20x$  \_\_\_\_  $4(100 - 5x)$