

TUTORIAL SHEET - (12)

Solve:-

1) $x - 13 = 8$

8) $\frac{4x+1}{3} - 5 = 2$

2) $\frac{x}{3} = 12$

9) $x^2 + 3 = 52$

3) $5x - 15 = 0$

Make "x" the subject:-

10) $\frac{x}{a} = b$

4) $\frac{3x}{2} = 9$

11) $ax + b = c$

5) $3x - 1 = 11$

12) $P = \frac{x - a}{n}$

6) $\frac{x}{2} + 7 = 3$

13) $\frac{x}{a} + p = N$

7) $3(x - 2) = 15$

14) $P = N - x$

TUTORIAL SHEET - (12)

Make "R" the subject

15) $I = \frac{V}{R}$

16) $P = \frac{mR^2}{Q}$

17) $F = \frac{kmM}{R^2}$

18) $B = A - R^2$

19) $C = P - RN$

20) $C = \frac{R}{a} + \frac{S}{b}$

21) $N = M \cdot \sqrt{RS - P}$

Change the subject to the letter indicated in the brackets.

22) $F = F_1 + F_2$ (F_1)

23) $h_2 = h_1 + F$ (h_1)

24) $t = s_1 + e - s_2$ (s_1)

25) $t = s_1 + e - s_2$ (s_2)

ANSWERS (to Tutorial sheet 12):-

(1) $x=21$ (2) $x=36$ (3) $x=3$ (4) $x=6$

(5) $x=4$ (7) $x=7$ (8) $x=5$ (9) $x=7$

(10) $x=ab$ (11) $x = \frac{c-b}{a}$ (12) $x=np+a$

(13) $x=a(N-p)$ (14) $x=N-P$ (15) $R = \frac{V}{I}$

(16) $R = \pm \sqrt{\frac{PQ}{m}}$ (17) $R = \pm \sqrt{\frac{kmM}{F}}$

(18) $R = \pm \sqrt{A-B}$ (19) $R = \frac{P-C}{N}$

(20) $R = a(C - \frac{S}{b})$ (21) $R = \frac{N^2}{M^2S} + \frac{P}{S}$

(22) $F_1 = F - F_2$ (23) $h_1 = h_2 - F$

(24) $s_1 = t - e + s_2$ (25) $s_2 = s_1 + e - t$

TUTORIAL SHEET - (10)
(Harder Equations)

Solve:-

1) $\frac{2x-4}{3} = 7$

6) $5x - 7 = 2x - 7$

2) $5x + 10 - 3x = 6$

7) $\frac{x}{2} - 3 = 7$

3) $7x - 4 = 5x + 9$

8) $3(x-5) = 2x$

4) $5 - 2x = 13$

9) $\frac{x}{2} + \frac{x}{3} = 10$

5) $12 - 3x = x + 6$

10) $\frac{x}{2} + 4 = \frac{3x}{5}$

TUTORIAL SHEET - (10)
(Harder Equations)

11) $\frac{a+5}{4} = \frac{a}{3}$

15) $5 - \frac{x-3}{4} = x$

12) $\frac{x-1}{3} - 2 = \frac{3x}{4}$

16) $\frac{5}{x-1} = \frac{3}{5-x}$

13) $\frac{3}{x} - 5 = \frac{2}{x}$

ANSWERS (to Tutorial sheet 11.):-

- (1) $x=12.5$ (2) $x=-2$ (3) $x=6.5$
(4) $x=-4$ (5) $x=1.5$ (6) $x=0$ (7) $x=20$
(8) $x=15$ (9) $x=12$ (10) $x=40$
(11) $x=15$ (12) $x=-5.6$ (13) $x=0.2$
(14) $x=12.4$ (15) $x=4.6$ (16) $x=3.5$

14) $\frac{3x-4}{2} - 10 = \frac{2x-5}{3}$