

SOLVING EQUATIONS CONTAINING FRACTIONS - EXERCISES

3) Solve for x:

(a)  $\frac{9}{x} + \frac{4}{x+4} = 1$

(b)  $x + \frac{10}{x-7} = 0$

(c)  $\frac{3x-2}{x+2} = x-1$

(d)  $\frac{2}{x} + \frac{x}{x-1} = \frac{1}{x-1}$

(e)  $\frac{3x}{x-1} = \frac{x+3}{2x-2} + x$

(f)  $x + \frac{1}{x} = \frac{13}{6}$

(g)  $5 - \frac{14}{x} - \frac{3}{x^2} = 0$

(h)  $\frac{1}{2} - \frac{2}{x^2-1} = \frac{1}{x+1}$

(i)  $x - \frac{6}{2-x} = \frac{3x}{x-2}$

(j)  $\frac{5x}{2x-5} - \frac{3}{x-4} = 2$

(k)  $\frac{6-5x}{2} - \frac{3+x}{2-x} = \frac{3}{2}$

(l)  $1 - \frac{12}{x^2-4} = \frac{3}{x+2}$

(m)  $1 = \frac{35}{x-4} - \frac{35}{x}$

(n)  $x + \frac{2}{3} = \frac{2x-12}{3x-9}$

(o)  $\frac{4}{5} + x = \frac{4x-50}{5x-25}$

(p)  $\frac{9}{x^2-27} = \frac{25}{x^2-11}$

(q)  $\frac{x}{x-4} - \frac{7}{x+4} - \frac{56}{x^2-16} = 0$

(r)  $\frac{2x}{x-3} = \frac{10}{x+1} - \frac{7x-27}{x-3}$

(s)  $\frac{1}{x-4} - \frac{3}{x+4} - \frac{6}{5x} = 0$

(t)  $x + \frac{14}{x-2} = \frac{7x}{x-2} + 1$

(u)  $\frac{x}{x-1} - \frac{12}{x^2-x} + \frac{1}{x-1} = 0$

(v)  $\frac{3x-1}{4x+7} = 1 - \frac{6}{x+7}$

(w)  $\frac{3x}{x^2+5x+6} = \frac{5x}{x^2+2x-3} - \frac{2}{x^2+x-2}$

(x)  $\frac{x+4}{x^2-3x+2} - \frac{5}{x^2-4x+3} - \frac{x-4}{x^2-5x+6} = 0$

(y)  $\frac{3x}{x-4} = 5 - \frac{12}{4-x}$

(z)  $6\left(\frac{x}{2}-1\right)\left(\frac{x}{3}+2\right) = 0$

SOLVING EQUATIONS CONTAINING FRACTIONS - EXERCISES (ANSWERS)

- 1) (a) 6 (b) -22 (c) -2 (d) 3 (e) 7 (f) 3 (g) 3 (h) 0  
 (i) 3 (j) -3 (k) 4 (l) 2 (m) 10 (n) 30

- 2) (a) -1 (b) -2 (c)  $\frac{1}{4}$  (d) 2 (e)  $\frac{1}{7}$  (f) 1 (g) 7 (h) 2  
 (i) -4 (j) 1 (k) No Solution (l) -1 (m) 2 (n) 2

- 3) (a) -3, 12 (b) 2, 5 (c) 0, 2 (d) -2 (e)  $\frac{1}{2}, 3$  (f)  $\frac{2}{3}, \frac{3}{2}$   
 (g)  $-\frac{1}{5}, 3$  (h) 3 (i) 3 (j)  $\pm 5$  (k) 0, 3 (l) 5  
 (m) -10, 14 (n) 1, 2 (o) 2, 3 (p)  $\pm 6$  (q) 7 (r)  $\frac{1}{9}$   
 (s) -1, 6 (t) 8 (u) -4, 3 (v) 2, 7 (w)  $-6, \frac{1}{2}$  (x) 6  
 (y) No Solution (z) -6, 2

- 4) (a)  $\frac{1 \pm \sqrt{11}}{2}$  (b)  $5 \pm \sqrt{13}$  (c)  $\frac{-3 \pm \sqrt{5}}{2}$   
 (d)  $1 \pm \sqrt{7}$  (e)  $-2 \pm \sqrt{2}$  (f)  $6 \pm \sqrt{3}$

- 5) 60 (6) 10, 11, 12 (7) 12, 14, 16 (8) 4 (9) 5  
 (10)  $\frac{1}{7}, 7$  (11)  $\frac{1}{3}, 6$  (12)  $-\frac{5}{3}, 3$  (13)  $\frac{450}{61}$  (14) \$60  
 (15) 54 goals (16) 15 yrs., 20 yrs, and 60 yrs. old  
 (17) 84 yrs. old