

Worksheet #6 Section 2.2 — Fractional Linear Equations

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Solve each equation leaving your final answer as a whole number or a fraction in reduced form.

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

(2) $2s = \frac{1}{2}$

(3) $\frac{5x}{7} = 10$

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

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

(6) $\frac{a}{4} = \frac{3}{8}$

(7) $\frac{s+2}{3} = 8$

(8) $3y - 2 = \frac{2}{7}$

(9) $\frac{x}{3} + \frac{x}{2} = \frac{1}{5}$

(10) $\frac{3s}{10} = 12$

(11) $\frac{3x-1}{4} = 2x + \frac{1}{3}$

(12) $\frac{3x+2}{2} = 5$

(13) $2 + \frac{3z}{5} = \frac{4}{3}$

(14) $\frac{2}{x-1} = \frac{5}{x}$

(15) $\frac{x-2}{2x+8} = \frac{3}{2}$

(16) $\frac{2}{z} - \frac{3}{z} = \frac{3}{2}$

(17) $\frac{3}{2} \left(\frac{2x-6}{6} \right) = \frac{4}{3}$

(18) $\frac{3}{4}t - \frac{5}{6}t = \frac{5}{12}$

(19) $\frac{y-1}{2} - \frac{3y-1}{3} = 2$

(20) $\frac{2}{3}(6y-3) - (2y-7) = 1$

(21) $t - \frac{5t-7}{2} = \frac{3}{4}$

(22) $\frac{t-2}{7} - \frac{2t}{14} = \frac{3t-2}{7}$

(23) $\frac{3}{2}(4x-2) - \frac{1}{2}(x-5) = 4$

(24) $2\frac{x-1}{3} + \frac{2}{3} = \frac{x}{2}$

(25) $3a - \frac{2}{3} = \frac{1}{12}$

(26) $\frac{3x-5}{5} + \frac{x-1}{3} = 6$

(27) $\frac{5a}{4} - \frac{3a}{6} = \frac{5}{4}$

(28) $\frac{3a-1}{2} - \frac{a-2}{6} = \frac{4a-5}{2}$

(29) $\frac{4x-3}{2} - \frac{1}{3} = \frac{2x-5}{2}$

(30) $\frac{2s-1}{5} - 3 = \frac{s+4}{2}$

(31) $\frac{3}{4} = \frac{3}{2t-4}$

(32) $\frac{2}{6} - \frac{3}{5}(5x+10) = \frac{1}{3}$

(33) $3 - \frac{3}{5}(7y+1) = \frac{5}{3}$

(34) $\frac{1}{4}(4x-1) - \frac{1}{3}(2x+3) = \frac{3}{2}$

(35) $\frac{2}{3}(x+2) - (x+4) = 3x+2$

(36) $3t-2 - \frac{2}{9}(3t-12) = 5$

$$(37) \quad \frac{3t}{12} - \frac{5t}{6} = \frac{1}{4}$$

$$(39) \quad \frac{3}{7} - \frac{2}{5}x = 5$$

$$(38) \quad 2 - s = \frac{5}{3} \left(\frac{4 - 2s}{3} \right)$$

$$(40) \quad \frac{3 - x}{3} - (4x - 3) = \frac{2}{3}$$

Answers: (1) $\frac{9}{2}$ (2) $\frac{1}{4}$ (3) 14 (4) 18 (5) 6 (6) $\frac{3}{2}$ (7) 22 (8) $\frac{16}{21}$
(9) $\frac{6}{25}$ (10) 40 (11) $-\frac{7}{15}$ (12) $\frac{8}{3}$ (13) $-\frac{10}{9}$ (14) $\frac{5}{3}$ (15) -7 (16) $-\frac{2}{3}$
(17) $\frac{17}{3}$ (18) -5 (19) $-\frac{13}{3}$ (20) -2 (21) $\frac{11}{6}$ (22) 0 (23) $\frac{9}{11}$ (24) 0
(25) $\frac{1}{4}$ (26) $\frac{55}{7}$ (27) $\frac{5}{3}$ (28) $\frac{7}{2}$ (29) $-\frac{2}{3}$ (30) -52 (31) 4 (32) -2
(33) $\frac{11}{63}$ (34) $\frac{33}{4}$ (35) $-\frac{7}{5}$ (36) $\frac{13}{7}$ (37) $-\frac{3}{7}$ (38) 2 (39) $-\frac{80}{7}$ (40) $\frac{10}{13}$