

## Worksheet #5 Section 2.1 — Integral Linear Equations

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Solve each equation.

(1)  $3x = 12$

(3)  $9t - 7 = 0$

(5)  $9 = 12x$

(7)  $2(y + 3) = 12$

(9)  $9 = 5s - 3(2s - 1)$

(11)  $2a + 3 = 4a + 7$

(13)  $-2(y - 1) = 3$

(15)  $3(4x - 1) = 8 - 3(x - 7)$

(17)  $-7 = -3z$

(19)  $3(-4 + t) = 6t - 1$

(21)  $6 - 2(3x + 1) = 5$

(23)  $-6 = -2 - 3y$

(25)  $3(x - 1) = 6(x + 1)$

(27)  $5a - 1 = -2a + 7$

(29)  $3y - 2y - (4y - 1) = 0$

(31)  $-3 - 2x = 2x - 6$

(33)  $2x + 2 + (3x - 2) = 2x - 11 - (3x + 1)$

(35)  $(3x - 2) - (2x + 1) = x - 3$

(37)  $9 - 2(2 - 3s) = 2s + 1 - 4$

(39)  $3x - (-8x) - 2 = -4x - (-2)$

(41)  $2(a - 1) - 3(2a - 5) = -4(5 - 2a)$

(43)  $8(2y - 3) = 8(y + 2) - 3$

(45)  $5a - (2a - 1) = 3$

(47)  $3x - 2x + 5x = 4 - 6 - 5$

(49)  $2(2x - 1) + 3(x - 1) = -2(x - 11)$

(2)  $4x - 1 = 15$

(4)  $3 - 2x = 5$

(6)  $2a - 5a = 6 - 2$

(8)  $s - 3 = 5$

(10)  $2(5x - 3) - 1 = 7(x - 1)$

(12)  $3s - 1 = 3s + 1$

(14)  $-3z = 7$

(16)  $-3(2y - 1) = -2(y + 2)$

(18)  $10y = 4y$

(20)  $5x - 3x - 2 = 5 - 3(3 - x)$

(22)  $-4n + 2 + 3n = -4 - n + 2n$

(24)  $2(2n + 1) = 4n$

(26)  $3 + 2(-2x - 3) = 2x - 1$

(28)  $5(9 - 7t) = 5(t + 2)$

(30)  $6 - 2z - 3 = 5z + 2 - 8z - 3$

(32)  $-2(t - 4) + 2 = -3 - t$

(34)  $3z - 11 - 2z + 2 = -(z - 1)$

(36)  $5 - 2(2x - 1) + 2 = 0$

(38)  $3(x - 3) = 5$

(40)  $9 - 4 = 4s - 1 - 6s$

(42)  $3b + 2 - 2(5b - 1) = 0$

(44)  $5x - 7(x - 1) = 3(-2 + 3x)$

(46)  $3 = -6(2x - 1) - 4$

(48)  $8 = 4x - 2 + (2x - 3)$

(50)  $3 + (6x - 1) = 2(3x + 1)$

Answers: (1) 4 (2) 4 (3)  $\frac{7}{9}$  (4) -1 (5)  $\frac{3}{4}$  (6)  $-\frac{4}{3}$  (7) 3 (8) 8 (9) -6  
(10) 0 (11) -2 (12) no solution (13)  $-\frac{1}{2}$  (14)  $-\frac{7}{3}$  (15)  $\frac{32}{15}$  (16)  $\frac{7}{4}$  (17)  $\frac{7}{3}$   
(18) 0 (19)  $-\frac{11}{3}$  (20) 2 (21)  $-\frac{1}{6}$  (22) 3 (23)  $\frac{4}{3}$  (24) no solution (25) -3  
(26)  $-\frac{1}{3}$  (27)  $\frac{8}{7}$  (28)  $\frac{7}{8}$  (29)  $\frac{1}{3}$  (30) -4 (31)  $\frac{3}{4}$  (32) 13 (33) -2 (34) 5  
(35) all real numbers (36)  $\frac{9}{4}$  (37) -2 (38)  $\frac{14}{3}$  (39)  $\frac{4}{15}$  (40) -3 (41)  $\frac{11}{4}$   
(42)  $\frac{4}{7}$  (43)  $\frac{37}{8}$  (44)  $\frac{13}{11}$  (45)  $\frac{2}{3}$  (46)  $-\frac{1}{12}$  (47)  $-\frac{7}{6}$  (48)  $\frac{13}{6}$  (49) 3  
(50) all real numbers