Linear Equations in One variable

Solve the equations.

(1) $5x - 20 = 0$

(2) $12x + 40 = 2x + 100$

(3) $2(2x - 6) + 10 = -2x + 16$

(4) $-(5x - 20) + 10x = 7x + 12$

(5) $-2(6x + 12) + 8x + 6 = 7x + 4$

(6) $5x - 2(4x - 8) + 10 = -5x + 30$

(7) $5x + 2(x - 4) = 6x - 10$

(8) $10x + 40 = -(5x - 20) + 7x + 20$

(9) $3(2x - 6) + 10 = 6x + 16$

(10) $3(7x + 1) = 6(x - 1) + 4$

(11) $2(3y - 5) + 10(y - 7) = 8(2y + 2)$

(12) $5(2x - 6) + 4(x - 6) = 14x - 54$

(13) $3k - 2(10 - 2k) = 41 - (4k + 6)$

(14) $\frac{5b}{3} + \frac{2b + 8}{5} = 2b + 2$

(15) $\frac{y + 4}{4} + \frac{2y - 1}{5} = y - 2$

(16) $\frac{5w}{6} - \frac{w + 12}{9} = \frac{w}{2}$

(17) $10(x + 1) - 5(2 + 2x) + 8 = 5 - 3x$

(18) $40(k + 5) - 5(10 + 2k) + 8(3k + 15) = 5(20 + 4k) + 2(k + 5) - (5k + 25)$

Answers

(1) 4
(2) 6
(3) 3
(4) 4
(5) -2
(6) 2
(7) -2
(8) 0
(9) No solution
(10) -1/3
(11) No solution
(12) All real numbers
(13) 5
(14) 6
(15) 8
(16) 6
(17) -1
(18) -5