C.

(1) $x = 9 - 3 = \underline{6}$

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

(3) $4 - 5 = x$

$-1 = x$

(4)

-3

$x =$

x

(6)

(7) $x =$

(8) $4x = 20$

$x = 5$

$x = -5$

$x = -3$

2

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

(13) $2x = -8$

$x = -4$

(14) $2x = 8$

$x = 4$

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

$x = 5$

(16) $7x - 2x = 12 + 3$

$5x = 15$

$x = 3$

(17) $7y - 5y = 2 + 8$

$2y = 10$

$y = 5$

(18) $4x - 2x = -11 - 5$

$2x = -16$

$x = -8$

(19) $5x - 2x = -15 + 6$

$3x = -9$

$x = -3$

(20) $3x = -15$

$x = -5$

(21) $-5 + 7 = 4x - 3x$

$2 = x$

(22) $7 + 3 = 5x - 2x$

$10 = 3x$

$3\frac{1}{3} = \frac{10}{3} = x$

both acceptable

(23) $2x+3x = 12-7$

$5x = 5$

$x = 1$

(24) $-2+5 = 8y-6y$

$3 = 2y$

$1.5 = \frac{3}{2} = y$

(25) $8-10 = -2x+4x$

$-2 = 2x$

$-1 = x$

(26) $12+6 = 3x$

$18 = 3x$

$6 = x$

(27) $3x-15 = 12$ (OR) $(x-5) = \frac{12}{3} = 4$

$3x = 27$ $\quad$ $x = 4+5 = 9$

$x = 9$

(28) $10x-15 = 15$ (OR) $2x-3 = \frac{15}{5} = 3$

$10x = 30$ $\quad$ $2x = 6$

$x = 3$ $\quad$ $x = 3$

(29) $15-10x = 30$ (OR) $3-2x = \frac{30}{5} = 6$

$15-30 = 10x$ $\quad$ $3-6 = 2x$

$-15 = 10x$ $\quad$ $-3 = 2x$

$-1.5 = -\frac{15}{10} = x$ $\quad$ $-\frac{3}{2} = x$

(30) $6x-12 = 8$

$6x = 20$

$x = \frac{20}{6} = \frac{10}{3} = 3\frac{1}{3}$

(31) $7x+2 = 5x-10$

$7x-5x = -10-2$

$2x = -12$

$x = -6$

(32) $22-3x = 2x+12$

$22-12 = 2x+3x$

$10 = 5x$

$2 = x$

(33) $13-3x = 4x-8$

$13+8 = 4x+3x$

$21 = 7x$

$3 = x$

(34) $x-18 = 2(2x-3)$

$x-18 = 4x-6$

$-18+6 = 4x-x$

$-12 = 3x$

$-4 = x$

(35) $8x-12 = 3x-27$

$8x-3x = -27+12$

$5x = -15$

$x = -3$

(36) $6x - 15 = 6 + 2x - 6$

$6x - 2x = 15$

$4x = 15$

$x = \frac{15}{4}$ OR $3\frac{3}{4}$

(37) $4 - 3x + 5 = 6 - 2x - 7$

$4 + 5 - 6 + 7 = -2x + 3x$

$10 = x$

(38) $x^2 + 5x = x^2 - 15$

$x^2 + 5x - x^2 = -15$

$5x = -15$

$x = -3$

(39) $6x + 3x^2 = 3x^2 - 2x - 24$

$6x + 3x^2 - 3x^2 + 2x = -24$

$8x = -24$

$x = -3$

(40) $3x - 12 - 2x + 10 = 6x - 2x + 10$

$x - 2 = 4x + 10$

$-2 - 10 = 4x - x$

$-12 = 3x$

$-4 = x$

Applications

(1) (a) $x + x + 5 + x + x + 5$ OR $2(x + x + 5)$

$= 4x + 10$ $= 2(2x + 5)$

$= 4x + 10$

(b) $4x + 10 = 62$

$4x = 52$

$x = 13$

OR half the perimeter $= x + x + 5 = 31$

$2x = 26$

$x = 13$

The Length $= x + 5 = 13 + 5 = 18cm$