S.107 (587)

a) $2x + 5 = 9 \quad /\!/ -5$

$2x + 5 - 5 = 9 - 5$

$\frac{2x}{2} = \frac{4}{2} \quad /\!/ :2$

$x = 2$

b) $3x = x - 6 \quad /\!/ -x$

$3x - x = x - 6 - x$

$\frac{2x}{2} = \frac{-6}{2} \quad /\!/ :2$

$x = -3$

c) $5 - x = 3 \quad /\!/ -5$

$5 - x - 5 = 3 - 5$

$\frac{-x}{-1} = \frac{-2}{-1} \quad /\!/ :(-1)$

$x = 2$

d) $7x - 1 = 5x - 1 \quad /\!/ -5x$

$7x - 1 - 5x = 5x - 1 - 5x$

$2x - 1 = -1 \quad /\!/ +1$

$2x - 1 + 1 = -1 + 1$

$\frac{2x}{2} = \frac{0}{2} \quad /\!/ :2$

$x = 0$

588 c) $6x - 7 = 6x + 3$ // $-6x$

$6x - 7 - 6x = 6x + 3 - 6x$

$-7 = 3$

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$6x - 7 = 6x - 7$

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591 a) $2(x + 4) = 12$

$2x + 8 = 12$ // -8

$2x + 8 - 8 = 12 - 8$

$\frac{2x}{2} = \frac{4}{2}$ // $:2$

$x = 2$

b) $5(x + 3) = 15$

$5x + 15 = 15$ // -15

$5x + 15 - 15 = 15 - 15$

$\frac{5x}{5} = \frac{0}{5}$ // $:5$

$x = 0$

(592) d) $5(x+1) = 3(2x+6)$

$5x + 5 = 6x + 18 \quad /\!/ -6x$

$5x + 5 - 6x = 6x + 18 - 6x$

$-x + 5 = 18 \quad /\!/ -5$

$-x + 5 - 5 = 18 - 5$

$\frac{-x}{-1} = \frac{13}{-1} \quad /\!/ :(-1)$

$x = -13$

e) $4(3 - 2x) = 3 - 2x$

$12 - 8x = 3 - 2x \quad /\!/ +2x$

$12 - 8x + 2x = 3 - 2x + 2x$

$12 - 6x = 3 \quad /\!/ -12$

$12 - 6x - 12 = 3 - 12$

$\frac{-6x}{-6} = \frac{-9}{-6} \quad /\!/ :(-6)$

$x = \frac{9}{6} = \frac{3}{2} = 1\frac{1}{2}\ (= 1{,}5)$

esim. $\frac{3x}{3} = \frac{1}{3} \quad /\!/ :3$

$x = \frac{1}{3}\ (= 0{,}333\ldots)$

595 a) $\frac{4(x+3)}{4} = 2 \cdot 4 \quad \| \cdot 4$

$x + 3 = 8 \quad \| -3$

$x + 3 - 3 = 8 - 3$

$x = 5$

597 b) $\frac{12(x+5)}{4} = \frac{12(x+2)}{3} \quad \| \cdot 12$

$3(x+5) = 4(x+2)$

$3x + 15 = 4x + 8 \quad \| -4x$

$3x + 15 - 4x = 4x + 8 - 4x$

$-x + 15 = 8 \quad \| -15$

$-x + 15 - 15 = 8 - 15$

$\frac{-x}{-1} = \frac{-7}{-1} \quad \| : (-1)$

$x = 7$

d) $\frac{18(5y-3)}{6} = \frac{18(3y+6)}{9} \quad \| \cdot 18$

$3(5y-3) = 2(3y+6)$

$15y - 9 = 6y + 12 \quad \| -6y$

$15y - 9 - 6y = 6y + 12 - 6y$

$9y - 9 = 12 \quad \| +9$

$9y - 9 + 9 = 12 + 9$

$\frac{9y}{9} = \frac{21}{9}$ ||:9

$y = \frac{21}{9}^{(3} = \frac{7}{3} = 2\frac{1}{3}$

607

a) $x^2 = 36$ ||$\sqrt{\ }$

$\sqrt{x^2} = \sqrt{36}$

$x = \pm 6$

b) $x^2 - 64 = 0$ ||+64

$x^2 - 64 + 64 = 0 + 64$

$x^2 = 64$ ||$\sqrt{\ }$

$\sqrt{x^2} = \sqrt{64}$

$x = \pm 8$

c) $\frac{2x^2}{2} = \frac{32}{2}$ ||:2

$\sqrt{x^2} = \sqrt{16}$ ||$\sqrt{\ }$

$x = \pm 4$

d) $x^2 + 25 = 0$ ||-25

$x^2 + 25 - 25 = 0 - 25$

$x^2 = -25$ ||$\sqrt{\ }$

$\sqrt{x^2} = \sqrt{-25}$

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