2 $a(b+c)$

$a\times b \quad a\times c$

$ab+ac$ ✓

3 $x(y-2)$

$x\times y \quad x\times -2$

$xy - x2$ ✓

4 $p(q-r)$

$p\times q \quad p\times -r$

$pq - pr$ ✓

5 $a(b+c-d$

$a\times b \quad a\times c \quad a\times -d$

$ab+ac-ad$ ✓

6 $x(a+b+c+d$

$x\times a \quad x\times b \quad x\times c \quad x\times d$

$x\vec{a} + x\vec{b} + x\vec{c} + x\vec{d}$ ✓

25.08.11

Sample b

1 $3x = 19$

$\div 3 \quad 3x \div 3 = 19 \div 3$

$x = 6.33$ ✓

2 $3x+5 = 8$

$-5 \quad 3x+5-5 = 8-5$

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

$x = 1$

3 $8 = 4x - 3$

$4x - 3 = 8$

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

$\div 4 \quad \frac{4x}{4} = \frac{11}{4}$

$x = 2\frac{3}{4}$

4 $3(x+5)$

$3\times x + 3\times 5$

$3x + 15$ ✓

5 $2x(4-3x)$

$2x\times 4 = 2x\times -3x$

$9x - 6x^2$ ✓

6 $4(2x+1) - 3(2x-5)$

$4\times 2x \quad 4\times 1 \quad -3\times 2x \quad -3\times -5$

$8x + 4 = 6x + 15$

$2x + 19$ ✓

7 $3(4y-5x) + 4(2y+x)$

$3\times 4y \quad 3\times -5x \quad 4\times 2y \quad 4\times x$

$12y - 15x + 8y + 4x$

$20y - 11x$ ✓

Rigour - expanding brackets

yr 9 student's work

8 $3(2w-4x+2) - (w+6x-4)$

$3\times 2w \quad 3\times -4x \quad 3\times 2 \quad -1\times w \quad -1\times 6x \quad -1\times -4$

$6w - 12x + 6 - w - 6x + 4$

~~$7w - 6x + 2$~~

$5w - 18x + 10$

9 $4 - 3x = 8$

$-4 \quad 4 - 4 - 3x = 8 - 4$

$\div -3 \quad \frac{-3x}{-3} = \frac{4}{-3}$

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

10 $3(2x+5) = 8$

$3\times 2x \quad 3\times 5 = 8$

$6x + 15 = 8$

$-15 \quad 6x + 15 - 15 = 8 - 15$

$\frac{6x}{6} = \frac{-7}{6}$

$x = -1\frac{1}{6}$

Bela Book

25.8

1 $2x + 3 = 11$

$-3 \quad 2x + 3 - 3 = 11 - 3$

$\div 2 \quad \frac{2x}{2} = \frac{8}{2}$

$x = 4$ ✓

Rigour - solving eqtns

yr 9 students work

2 $8x - 1 = 23$

$+1 \quad 8x - 1 + 1 = 23 + 1$

$\div 8 \quad \frac{8x}{8} = \frac{24}{8}$

$x = 3$ ✓

3 $4x + 5 = 9$

$-5 \quad 4x + 5 - 5 = 9 - 5$

$\div 4 \quad \frac{4x}{4} = \frac{4}{4}$

$x = 1$ ~~6~~ ✓

4 $6x - 2 = 10$

$+2 \quad 6x - 2 + 2 = 10 + 2$

$\div 6 \quad \frac{6x}{6} = \frac{12}{6}$

$x = 2$ ✓

5 $3x + 11 = 5$

$-11 \quad 3x + 11 - 11 = 5 - 11$

$\div 3 \quad \frac{3x}{3} = \frac{-6}{3}$

$x = -2$ ✓

6 $8x - 4 = 11$

$+4 \quad 5x - 4 + 4 = 11 + 4$

$\div 5 \quad \frac{5x}{5} = \frac{15}{5}$

$x = 3$ ✓

7 $-2x + 8 = 2$

$-8 \quad -2x + 8 - 8 = 2 - 8$

$\div -2 \quad \frac{-2x}{-2} = \frac{-6}{-2}$

$x = 3$ ✓