Algebra Recap

Expand and Simplify — Blue Book Exercise 5C Page 87

4 d) $5k(3m+4) - 2m(3-2k)$

$\quad = 15km + 20k \quad - 6m + 4km$

$\quad = 19km + 20k - 6m$

6 d) $2r(3r+r^2) - 3r^2(4-2r)$

$\quad = 6r^2 + 2r^3 - 12r^2 + 6r^3$

$\quad = -6r^2 + 8r^3$

Factorising   Exercise 5D

3) $8m + 12k = 4(2m+3k)$

6) $5g^2 + 3g = g(5g+3)$

9) $4t^2 - 3t = t(4t-3)$

12) $8pt + 6mp = 2p(4t+3m)$

15) $8abc + 6bed = 2b(4ac+3ed)$

19) $6nt^2 - 3nt + 9m^2t = 3mt(2t - 1 + 3m)$

Linear Equations   Exercise 5E

3) $\dfrac{x}{8} + 3 = 12$

$\dfrac{x}{8} \times 8 + 3 \times 8 = 12 \times 8$

$x + 24 = 96$

$x = 96 - 24$

$x = 72$

6) $\dfrac{2x}{3} + 5 = 12$

$2x + 15 = 36$

$2x = 36 - 15$

$2x = 21$

$x = \dfrac{21}{2}$ $x = 10\frac{1}{2}$

9) $\dfrac{t - 5}{2} = 3$

$\dfrac{(t-5)}{2} \times 2 = 3 \times 2$

$t - 5 = 6$

$t = 6 + 5$

$t = 11$

Extra $\dfrac{x}{3} + \dfrac{x}{2} = 10$

$\dfrac{x}{3} \times 6 + \dfrac{x}{2} \times 6 = 10 \times 6$

$$2x + 3x = 60$$
$$5x = 60$$
$$x = \frac{60}{5}$$

$$\underline{x = 12}$$

$$2x + 3x = 60$$
$$5x = 60$$
$$x = \frac{60}{5}$$

$$\underline{x = 12}$$