Algebra Revision

Exercise 5B

4) $4(5+2k)$

$= 20 + 8k$

8) $4(3d-2n)$

$= 12d - 8n$

12) $2k(4-k)$

$= 8k - 2k^2$

Exercise 5B

1) $2(3+m) = 6+2m$

2) $5(2+e) = 10+5e$

3) $3(4-y) = 12-3y$

5) $3(2-4f) = 6-12f$

6) $2(5-3w) = 10-15w$

7) $5(2k+3m) = 10k+15m$

9) $t(t+3) = t^2+3t$

10) $k(k-3) = k^2 - 3k$

11) $4t(t-1) = 4t^2 - 4t$

Exercise 5C

1a) $4t + 3t = 7t$

1e) $2t^2 + 3t^2 = 5t^2$

2a) $3(4+t) + 2(5+t)$

$= 12 + 3t + 10 + 2t$

$= \underline{22 + 5t}$

2c) $4(3+2f) + 2(5-3f)$

$= 12 + 8f + 10 - 6f$

$= \underline{22 + 2f}$

Exercise

1b) $3d + 2d + 4d = 9d$

1c) $5e - 2e = 3e$

1d) $3t - t = 2t$

1f) $6y^2 - 2y^2 = 4y^2$

1g) $3ab + 2ab = 5ab$

1h) $7a^2d - 4a^2d = 3a^2d$

2b) $5(3+2k) + 3(2+3k)$

$= 15 + 10k + 6 + 9k$

$= 21 + 19k$

2d) $5(1+3g) + 3(3-4g)$

$= 5 + 15g + 9 - 12g$

$= 14 + 3g$

3a) $4(3+2h) - 2(5+3h)$

$= 12 + 8h - 10 - 6h$

$= 2 + 2h$

3b) $5(3g+4) - 3(2g+5)$

$= 15g + 20 - 6g - 15$

$= 9g + 5$

3c) $5(5k+2) - 2(4k-3)$

$= 25k + 10 - 8k + 6$

$= 17k + 16$

3d) $4(4e+3) - 2(5e-4)$

$= 16e + 12 - 10e + 8$

$= 6e + 20$

4a) $m(4+p) + p(3+m)$

$= 4m + mp + 3p + mp$

$= 4m + 3p + 2mp$

4b) $k(3+2h) + h(4+3k)$

$= 3k + 2hk + 4h + 3hk$

$= 3k + 4h + 5hk$

Exercise 5D Factorising

1) $6m + 12t = 6(m + 2t)$

4) $4r + 8t = 4(r + 2t)$

7) $4w - 6t = 2(2w - 3t)$

10) $3m^2 - 3mp = 3m(m - p)$

Exercise

2) $9t + 3p = 3(3t + p)$

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

5) $mn + 3m = m(n + 3)$

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

8) $3y^2 + 2y = y(3y + 2)$

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

11) $6p^2 + 9pt = 3p(2p + 3t)$

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

13) $8ab - 4bc = 4b(2a - c)$

14) $5b^2c - 10bc = 5bc(b - 2)$

15) $8abc + 6bcd = 2b(4ac - 3cd)$

Exercise 5G

1) $2x+3 = x+5$

$2x - x = +5 - 3$

$\underline{x = 2}$

11) $3(2y+3) = 5(2y+1)$

$6y + 9 = 10y + 5$

$+9 - 5 = 10y - 6y$

$+4 = 4y$

$\frac{4}{4} = y$

$1 = y$ $\quad y = 1$

---

2) $5y + 4 = 3y + 6$

$5y - 3y = +6 - 4$

$2y = 2$

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

$y = 1$

3)

$$4a - 3 = 3a + 4$$

$$4a - 3a = +4 + 3$$

$$\underline{a = 7}$$