2A–2B

1 **a** x^7 **b** d^{12} **c** y^{a+b+c} **d** x

      e $5k^5$ **f** $2m^5$ **g** $30x^8$ **h** $5s^{-1}$

      i $12t^{12}$

2 **a** x^{12} **b** $4x^{10}$ **c** x^6 **d** x^3

   e $x^{-2} = \dfrac{1}{x^2}$ **f** x^7

3 **a** $7x + 9y$ **b** $-2a - 3b$

   c $-xy + 8pq$ **d** $2x + x^2 - 2x^3$

   e $7b^2 + 5b$ **f** $7y + y^2 + 3y^3$

   g $4abc - xy^2 - 7xy$ **h** $-pqr - 3abc$

   i $x^2y^2 - 2xy + 6xy^2 + x^2y$

4 **a** $p^0 = 1$ but then she needs to multiply by 4. Correct answer: 4

   b She has forgotten to square the 7. Correct answer: $49x^6$

   c She has multiplied the powers rather than adding them. Correct answer: $6y^5$

   d She has subtracted the two numbers rather than dividing them. Correct answer: $5a^3$

5 **a** $-48x$ **b** $21y$ **c** $40x^2$ **d** $70a^3$

6 **a** $4x$ **b** 3 **c** $2a$ **d** x^2

7 **a** $2x + 10y$ **b** $10b - 15c$

   c $3xy - 6xz$ **d** $4x - 12y + 8z$

   e $p^2 + 2q^2p - 3rp$ **f** $-2x^3 - 2x^2 + 6x$

8 **a** $-7a^3b^2$ **b** $15x^3y^4$ **c** $3a^2b$ **d** $\dfrac{3r}{4pq^4}$

9 **a** $x^2y^2z^2$ **b** $\dfrac{x^3}{yz}$ **c** $3x^4y^6$ **d** $6x^2y^2z^7$

   e x^2 **f** $4x^6 + 4x^9$