Solutions

Marking: **M1** a correct method, **A1** the correct answer.

Each answer shows the steps, then the **result**.

2.1

- $(3a^2)^3 = 3^3a^6$
- $\mathbf{27a^6}$

2.2

- $10 \div 2 = 5$, $x^6 \div x^2 = x^4$
- $\mathbf{5x^4}$

2.3

- $a^4 \times a^{-7} = \mathbf{a^{-3}}$ (or $\frac{1}{a^3}$)

3.1

- $(2x^2y)^3 = 2^3x^6y^3$
- $\mathbf{8x^6y^3}$

3.2

- $\frac{15}{5} = 3$, $a^7 \div a^3 = a^4$, $b^2 \div b^2 = 1$
- $\mathbf{3a^4}$

3.3

- $81 = 3^4$
- $3^x = 3^4$ so $\mathbf{x = 4}$