

Section 2: Indices**Exercise level 1****Do not use a calculator in this exercise.**

1. Find:

(i) 3^4

(ii) 2^6

(iii) $4^{1/2}$

(iv) 6^0

(v) 5^{-2}

(vi) $64^{1/3}$

(vii) $16^{-1/2}$

(viii) $8^{5/3}$

(ix) $36^{-3/2}$

(x) $\left(\frac{1}{2}\right)^{-1}$

(xi) $\left(\frac{25}{9}\right)^{-1/2}$

(xii) $\left(\frac{27}{64}\right)^{-2/3}$

2. Simplify the following:

(i) $3^{11} \times 3^{-4} \div 3^3$

(ii) $(2^5)^3 \times (2^7)^{-2}$

(iii) $\frac{5^6}{5^5 \times 5^3}$

3. Simplify:

(i) $2^3 \times 16^{\frac{1}{2}}$

(ii) $\frac{3^5 \times 5^3}{\sqrt{81 \times 25}}$