1 Evaluate the following.

(i) 200^0 **[1]**

(ii) $\left(\frac{25}{9}\right)^{-\frac{1}{2}}$ **[3]**

2 **(i)** Evaluate $\left(\frac{1}{27}\right)^{\frac{2}{3}}$. **[2]**

(ii) Simplify $\frac{(4a^2c)^3}{32a^4c^7}$. **[3]**

3 You are given that n, $n + 1$ and $n + 2$ are three consecutive integers.

(i) Expand and simplify $n^2 + (n+1)^2 + (n+2)^2$. **[2]**

(ii) For what values of n will the sum of the squares of these three consecutive integers be an even number? Give a reason for your answer. **[2]**

4 **(i)** Evaluate $(0.2)^{-2}$. **[2]**

(ii) Simplify $(16a^{12})^{\frac{3}{4}}$. **[3]**

5 Find the value of each of the following.

(i) $\left(\frac{5}{3}\right)^{-2}$ **[2]**

(ii) $81^{\frac{3}{4}}$ **[2]**

6 **(i)** Evaluate $\left(\frac{1}{5}\right)^{-2}$. **[2]**

(ii) Evaluate $\left(\frac{8}{27}\right)^{\frac{2}{3}}$. **[2]**

7 **(i)** Simplify $\frac{10(\sqrt{6})^3}{\sqrt{24}}$. **[3]**

(ii) Simplify $\frac{1}{4-\sqrt{5}} + \frac{1}{4+\sqrt{5}}$. **[2]**

8 **(i)** Evaluate $9^{-\frac{1}{2}}$. **[2]**

(ii) Simplify $\frac{(4x^4)^3 y^2}{2x^2y^5}$. **[3]**

9 Expand and simplify $(n+2)^3 - n^3$. **[3]**

10 **(i)** Evaluate $\left(\frac{9}{16}\right)^{-\frac{1}{2}}$. **[2]**

(ii) Simplify $\frac{\left(2ac^2\right)^3 \times 9a^2c}{36a^4c^{12}}$. **[3]**

11 **(i)** Write down the value of each of the following.

(A) 4^{-2} **[1]**

(B) 9^0 **[1]**

(ii) Find the value of $\left(\frac{64}{125}\right)^{\frac{4}{3}}$. **[2]**