

Indices Past Paper Questions GCSE Edexcel – Non-Calculator**1.**

(a) Work out the value of $\left(\frac{16}{81}\right)^{\frac{3}{4}}$

.....
(2)

$$3^a = \frac{1}{9} \quad 3^b = 9\sqrt{3} \quad 3^c = \frac{1}{\sqrt{3}}$$

(b) Work out the value of $a + b + c$

2.

$$\frac{y^4 \times y^n}{y^2} = y^{-3}$$

() Find the value of n .

3.

(a) Write down the value of $36^{\frac{1}{2}}$

.....
(1)

(b) Write down the value of 23^0

.....
(1)

(c) Work out the value of $27^{-\frac{2}{3}}$

.....
(2)

4.

(a) Write down the value of $100^{\frac{1}{2}}$

.....
(1)

(b) Find the value of $125^{\frac{2}{3}}$

.....
(2)

5.

(a) Find the value of $81^{-\frac{1}{2}}$

.....
(2)

(b) Find the value of $\left(\frac{64}{125}\right)^{\frac{2}{3}}$

.....
(2)

6.

$$16^{\frac{1}{5}} \times 2^x = 8^{\frac{3}{4}}$$

Work out the exact value of x .

7.

(a) Find the value of $\sqrt[3]{8 \times 10^6}$

.....
(1)

(b) Find the value of $144^{\frac{1}{2}} \times 64^{-\frac{1}{3}}$

.....
(2)

(c) Solve $3^{2x} = \frac{1}{81}$

$x =$
(2)

8.

(a) Write down the value of $64^{\frac{1}{2}}$

.....
(1)

(b) Find the value of $\left(\frac{8}{125}\right)^{\frac{2}{3}}$

.....
(2)