

Indices – exam questions

Question 1:

(a) Find the value of

(i) $4^{-\frac{1}{2}}$

(ii) $\left(\frac{1}{27}\right)^{-\frac{2}{3}}$

Question 2:

(a) Write down the value of

(i) $4^9 \div 4^7$

(ii) $\left(\frac{1}{3}\right)^{-2}$

Question 3:

(a) Write down the value of

(i) 3^0

(ii) $36^{\frac{1}{2}}$

Question 4:

(a) Simplify $\frac{w^3 \times w^5}{w^2}$

(c) Simplify $(2x^3y)^4$

Question 5:

(a) Find the value of

(i) $(0.5)^{-3}$

(ii) $(2.25)^{1.5}$

Question 6:

(a) Write down the value of

(i) $\sqrt{121}$

(ii) 7^0

(b) Write as a single power of 5

(i) $5^3 \times 5^8$

(ii) $\sqrt{125}$

Question 7:

(a) Write as a power of 4

(i) $\frac{1}{4}$ of 4^8

(ii) 2^8

(iii) $\frac{4^{10}}{4^2 \times 4^4}$

Question 8:

(a) Write down the value of

(i) 6^0

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

Question 9:

(b) Work out the value of

$$9^{\frac{3}{2}} - \left(\frac{1}{16}\right)^{-\frac{1}{2}}$$

Question 10:

(b) Work out.

(i) $\frac{5^2 \times 5^5}{5^4}$

Question 11:

(a) Evaluate.

$$\left(\frac{1}{9}\right)^{\frac{3}{2}}$$