

Algebra - Indices

Find the value of

(i) 6^0

(ii) $64^{\frac{1}{2}}$

(iii) $\left(\frac{27}{8}\right)^{-\frac{2}{3}}$

(Total 4 marks)

Algebra - Indices

Find the value of

(i) $6^0 = 1$

(ii) $64^{\frac{1}{2}} = \sqrt{64} = 8$

(iii) $\left(\frac{27}{8}\right)^{-\frac{2}{3}} = \left(\frac{8}{27}\right)^{\frac{2}{3}} = \left(\sqrt[3]{\frac{8}{27}}\right)^2 = \left(\frac{\sqrt[3]{8}}{\sqrt[3]{27}}\right)^2 = \left(\frac{2}{3}\right)^2 = \frac{4}{9}$

(Total 4 marks)

1. $x^p \times x^q = x^{p+q}$

2. $x^p \div x^q = x^{p-q}$

3. $(x^p)^q = x^{pq}$

4. $x^0 = 1$

5. $x^1 = x$

6. $x^{-p} = \frac{1}{x^p}$

7. $x^{\frac{1}{p}} = \sqrt[p]{x}$

8. $x^{p/q} = (\sqrt[q]{x})^p$