



SCAN ME

Fractional Indices



SCAN ME

← REVISE THIS TOPIC

→ CHECK YOUR ANSWERS



1 (a) Write down the value of $9^{\frac{1}{2}}$ [1 mark]

Answer _____

1 (b) Write down the value of $64^{\frac{1}{2}}$ [1 mark]

Answer _____

1 (c) Write down the value of $27^{\frac{1}{3}}$ [1 mark]

Answer _____

1 (d) Write down the value of $10000^{\frac{1}{4}}$ [1 mark]

Answer _____

1 (e) Write down the value of $8^{\frac{1}{3}}$ [1 mark]

Answer _____

1 (f) Write down the value of $32^{\frac{1}{5}}$ [1 mark]

Answer _____





2 (a) Write down the value of $4^{\frac{3}{2}}$ [1 mark]

Answer _____

2 (b) Write down the value of $64^{\frac{2}{3}}$ [1 mark]

Answer _____

2 (c) Write down the value of $16^{\frac{3}{4}}$ [1 mark]

Answer _____

2 (d) Write down the value of $1000^{\frac{5}{3}}$ [1 mark]

Answer _____

2 (e) Write down the value of $25^{\frac{3}{2}}$ [1 mark]

Answer _____

2 (f) Write down the value of $1^{\frac{4}{5}}$ [1 mark]

Answer _____





3 (a) Work out the value of $\left(\frac{4}{25}\right)^{\frac{3}{2}}$ [2 marks]

Answer _____

3 (b) Work out the value of $\left(\frac{8}{125}\right)^{\frac{1}{3}}$ [2 marks]

Answer _____

3 (c) Work out the value of $\left(\frac{8}{27}\right)^{\frac{2}{3}}$ [2 marks]

Answer _____

3 (d) Work out the value of $\left(\frac{1}{32}\right)^{\frac{4}{5}}$ [2 marks]

Answer _____

3 (e) Work out the value of $\left(\frac{9}{100}\right)^{\frac{3}{2}}$ [2 marks]

Answer _____

Turn over ►





4 (a) $36^n = 6$ [1 mark]
Work out the value of n .

Answer _____

4 (b) $100^n = 1000$ [1 mark]
Work out the value of n .

Answer _____

4 (c) $8^n = 16$ [1 mark]
Work out the value of n .

Answer _____

4 (d) $25^n = 125$ [1 mark]
Work out the value of n .

Answer _____

4 (e) $32^n = 4$ [1 mark]
Work out the value of n .

Answer _____

4 (f) $400^n = 8000$ [1 mark]
Work out the value of n .

Answer _____





5 (a) Simplify $(49x^8y^{10})^{\frac{1}{2}}$ [2 marks]

Answer _____

5 (b) Simplify $(64x^9y^{30})^{\frac{1}{3}}$ [2 marks]

Answer _____

5 (c) Simplify $(125x^3y^{12})^{\frac{2}{3}}$ [2 marks]

Answer _____

5 (d) Simplify $(a^6b^8c^4)^{\frac{3}{2}}$ [2 marks]

Answer _____

5 (e) Simplify $(16m^{20}n^4)^{\frac{1}{4}}$ [2 marks]

Answer _____

Turn over ►





6 (d) Simplify $\left(\frac{25x^4}{81y^{18}}\right)^{\frac{1}{2}}$ [3 marks]

Answer _____

6 (d) Simplify $\left(\frac{8p^3}{27q^{21}}\right)^{\frac{1}{3}}$ [3 marks]

Answer _____

6 (d) Simplify $\left(\frac{a^6b^3}{125m^9n^{30}}\right)^{\frac{2}{3}}$ [4 marks]

Answer _____

6 (d) Simplify $\left(\frac{16k^{100}}{81x^{16}y^{32}}\right)^{\frac{3}{4}}$ [4 marks]

Answer _____

