Exercise 1C

Do not use a calculator. You may skip showing work and write the answer only.

1 Find the values of

a $25^{\frac{1}{2}}$ **b** $27^{\frac{1}{3}}$ **c** $64^{\frac{1}{6}}$ **d** $49^{\frac{1}{2}}$ **e** $\left(\frac{1}{4}\right)^{\frac{1}{2}}$ **f** $1^{\frac{1}{4}}$

g $(-8)^{\frac{1}{3}}$ **h** $(-1)^{\frac{1}{5}}$ **i** $8^{\frac{4}{3}}$ **j** $27^{\frac{2}{3}}$ **k** $25^{\frac{3}{2}}$ **l** $49^{\frac{3}{2}}$

m $\left(\frac{1}{4}\right)^{\frac{3}{2}}$ **n** $\left(\frac{4}{9}\right)^{\frac{1}{2}}$ **o** $\left(\frac{27}{8}\right)^{\frac{1}{3}}$ **p** $\left(\frac{16}{81}\right)^{\frac{1}{4}}$

2 Find the values of

a 7^0 **b** 3^{-1} **c** 5^0 **d** 4^{-1} **e** 2^{-3} **f** $\left(\frac{1}{2}\right)^{-1}$

g $\left(\frac{1}{3}\right)^{-2}$ **h** $\left(\frac{4}{9}\right)^0$ **i** 3^{-3} **j** $(-6)^{-1}$ **k** $\left(-\frac{1}{6}\right)^0$ **l** $\left(\frac{2}{3}\right)^{-2}$

m $\left(-\frac{1}{2}\right)^{-2}$ **n** $\dfrac{1}{3^{-1}}$ **o** $\dfrac{2^{-1}}{3^{-2}}$ **p** $\dfrac{2^0 \times 3^{-2}}{5^{-1}}$

3 Find the values of

a $8^{-\frac{1}{3}}$ **b** $8^{-\frac{2}{3}}$ **c** $4^{-\frac{1}{2}}$ **d** $4^{-\frac{3}{2}}$ **e** $27^{-\frac{2}{3}}$ **f** $\left(\frac{1}{4}\right)^{-\frac{1}{2}}$

g $\left(\frac{1}{8}\right)^{-\frac{1}{3}}$ **h** $\left(\frac{1}{27}\right)^{-\frac{2}{3}}$ **i** $\left(\frac{4}{9}\right)^{-\frac{1}{2}}$ **j** $\left(\frac{8}{27}\right)^{-\frac{1}{3}}$ **k** $\left(\frac{16}{81}\right)^{-\frac{1}{4}}$ **l** $\left(\frac{27}{8}\right)^{-\frac{4}{3}}$

4 Find the values of

a $0.16^{0.5}$ **b** $\left(\frac{4}{9}\right)^{1\frac{1}{2}}$ **c** $\left(2\frac{1}{4}\right)^{1\frac{1}{2}}$ **d** $(0.\dot{4})^{\frac{1}{2}}$

Exercise 1D

You may skip showing work and write the answer only.

1 Convert these to the form x^n.

a $\frac{1}{x}$ **b** $\frac{1}{x^2}$ **c** $\sqrt{x}$ **d** $\sqrt[3]{x}$ **e** $\frac{1}{x^4}$ **f** $\frac{1}{x^{-4}}$

g $\frac{1}{\sqrt{x}}$ **h** $\frac{1}{x^{-7}}$ **i** $\frac{1}{\sqrt[3]{x}}$ **j** $\sqrt[3]{x^2}$ **k** $\frac{1}{\sqrt[4]{x^3}}$ **l** $\frac{1}{\sqrt{x^5}}$

2 Convert these to the form kx^n.

a $\frac{3}{x}$ **b** $\frac{4}{3x}$ **c** $6\sqrt{x}$ **d** $\frac{5}{x^3}$ **e** $\frac{1}{4x^4}$ **f** $\frac{\sqrt{x}}{3}$

g $\frac{1}{5\sqrt{x}}$ **h** $\frac{6}{x^{-7}}$ **i** $\frac{4}{5\sqrt[3]{x}}$ **j** $7\sqrt[3]{x^2}$ **k** $\frac{2}{\sqrt[4]{x^3}}$ **l** $\frac{8}{3\sqrt{x}}$