

- 1) Simplify the following:
- $y^4 \times y^5$
 - $x^2 \times x^6$
 - $(p^4)^5$
 - $(x^3)^2$
 - $(x^4)^{-2}$
 - $(x^{-3})^{-5}$
 - $x^7 \div x^2$
 - $\frac{t^5}{t^3}$
- 2) Work out the value of the following, leaving your answer in fraction form when necessary
- 5^0
 - 4^{-2}
 - 5^{-3}
 - $49^{\frac{1}{2}}$
 - $8^{\frac{1}{3}}$
 - $32^{\frac{2}{5}}$
 - $16^{-\frac{1}{2}}$
 - $27^{-\frac{1}{3}}$
 - $64^{-\frac{2}{3}}$
- 3) $5\sqrt{5}$ can be written in the form 5^n .
Calculate the value of n .
- 4) $2\sqrt[3]{8}$ can be written in the form 2^n .
Calculate the value of n .
- 5) $a = 2^x$, $b = 2^y$
Express in terms of a and b
- 2^{x+y}
 - 2^{2x}
 - 2^{x+2y}