

## (4) More Indices (Negative and Fractional)

### WORKING AT D/E

(1) Without a calculator, find  $\left(\frac{25}{36}\right)^{\frac{1}{2}}$ .

(2) Write  $\sqrt[4]{x}$  in the form  $x^n$

(3) Without a calculator, show that  $\left(\frac{1}{8}\right)^{-\frac{2}{3}}$  is an integer.

### WORKING AT B/C

(1) Write  $x\sqrt{x}$  in the form  $x^n$

(2) Fully simplify  $\sqrt{\frac{32x^8}{2x^2}}$

(3) Write  $\frac{(x^6)^{\frac{1}{3}}}{(x^4)^{-2}}$  in the form  $x^n$  where  $n$  is an integer to be found.

### WORKING AT A\*/A

(1) Without a calculator, simplify  $\left(\frac{16}{81}x^{-0.25}\right)^{0.75}$

(2) Show that the fraction  $\frac{(Ax+B)(Ax-B)}{A^2x^2}$  can be written as  $1 - \left(\frac{B}{Ax}\right)^2$

(3) Given that  $P = \frac{27}{M^{12}}$  write  $P^{\frac{-1}{3}}$  in terms of  $M$ .  
Give your answer as a simplified fraction.