

## Problem 0580/42/M/J/23 9A

Simplify.

(i)  $(3x^2y^4)^3$

Sol  $3^3 (x^2)^3 (y^4)^3$   
 $27 x^6 y^{12}$

(ii)  $\left(\frac{16}{x^{16}y^8}\right)^{-\frac{3}{2}}$

Sol  $\left(\frac{x^{16}y^8}{16}\right)^{\frac{3}{2}}$   
 $x^{16 \times \frac{3}{2}} y^{8 \times \frac{3}{2}}$   

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 $16^{\frac{3}{2}}$   
 $x^{24} y^{12}$   

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 $64$

