

6 It is given that $p = \log_2 x$ and $q = \log_2 y$

6 (a) Express

$$\log_2 \left(\frac{x^2}{y} \right)$$

in terms of p and q

[2 marks]

6 (b) Express

$$\log_2 (16x^3 \sqrt{y})$$

in terms of p and q

Give your answer in a form not involving logarithms.

[3 marks]