

Problem Sheet 2 Indices & Logs

$$Q1) \sqrt{9 \times 36} = 12$$

$$Q2) \begin{array}{l} 2 \\ 12 \end{array}$$

$$Q3) (5\sqrt{2})^2 = (25)(2) = 50$$

$$Q4) \begin{array}{l} 3 \\ 5 \end{array}$$

$$Q5) \begin{array}{l} \sqrt{180} = 6\sqrt{5} \\ \sqrt{63} = 3\sqrt{7} \end{array}$$

$$Q11) \begin{array}{l} 7^7 \\ t^5 \\ (\frac{1}{2})^4 \end{array}$$

$$Q12) (i) \frac{4}{9} \quad (ii) \frac{8}{125} \quad (iii) \frac{1}{4} \quad (iv) \frac{1}{27}$$

$$Q13) \begin{array}{l} 8^2 \\ x^{11} \\ 8^6 \\ z^{12} \end{array}$$

$$Q15) \begin{array}{l} 6^{16} \\ 6^{-12} \\ x^{12} \end{array}$$

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Q6) $64a^2$
 $343a^3b^3$
 $1679616x^4y^4$

Q17) $15x^5$
 $15x^3$
 $54x^3$
 $5x^4$
 $15x''$