

TUTORIAL 1 – SHEET 2

1. Evaluate
 - a) 8^4
 - b) $(-6)^3$
 - c) $\frac{4}{8^2}$

2. Write each of the following using index notation:
 - a) $13.13.13.13.13$
 - b) $\frac{4.4.4}{9.9.9}$

3. Explain why $(ab)^2$ is equivalent to a^2b^2 .

4. Remove the brackets from
 - a) $(5x)^4$
 - b) $(-3y)^5$
 - c) $(-4z)^4$

5. Simplify
 - a) $6^9 6^4 6^5$
 - b) $z^9 z^8 z^6$
 - c) $aa^3 a^6$

6. Use a calculator to find
 - a) $121^{3.5}$
 - b) $4.1^{1/3}$
 - c) $7.5^{1/4}$
 - d) $15^{2/3}$
 - e) $56^{-0.2}$

7. Simplify
 - a) $\frac{z^9}{z^4}$
 - b) $\frac{x^{15}}{x^4}$
 - c) $\frac{a^9}{a}$
 - d) $\frac{a}{a^7}$

8. Simplify
 - a) $t^{-7}t^4$
 - b) $w^7w^{-9}w^4$
 - c) $x^{\frac{1}{2}}x^{\frac{3}{4}}$

9. Remove the brackets from
 - a) $(4^9 5^2)^3$
 - b) $(9^2 x)^4$
 - c) $(ab^2 c^3)^4$
 - d) $(a^{-1} b^3)^4$

10. Remove the brackets from
 - a) $\left(5^{\frac{1}{2}}\right)^4$
 - b) $\left(m^{\frac{1}{2}}\right)^6$
 - c) $\left(a^2 b\right)^{\frac{1}{3}}$