

MCR 3UI Unit 4: Reivew for quiz

1. Simplify. Write your answer using only positive exponents.

a) $\frac{(-36x^2y^7)}{(-6x^5y^{-2})(3xy)}$ b) $\left(\frac{-3x^{-5}y^2}{6x^8y}\right)^{-4}$ c) $\left(\sqrt{x^{\frac{2}{3}}}\right)^6$ d) $(4x^3y^{-4})(-3x^{-5}y^6)$

2. Evaluate. Full marks awarded only if Exponent Rules are used. You must show work for full marks.

a) $\frac{3^{-3} + 3^{-4}}{3^{-5}}$ b) $\frac{2^{-3} + 2^2}{3^0}$ c) $\frac{4^{-4}}{4^{-5}} + \frac{4^0}{4^2}$ d) $\frac{2^{-5}}{2^{-3} + 2^{-4}}$

3. What is $17^{\frac{3}{5}}$ in radical form? _____

4. What is $(\sqrt[7]{x})^4$ in exponential form? _____

5. Convert to radical form then evaluate the following using exponent rules where possible. No marks are given for decimal answers.

(a) $\left(\frac{27}{64}\right)^{-\frac{2}{3}}$ (You must show work for full marks) (b) $\left(\frac{1}{81}\right)^{\frac{1}{4}}$

6. Solve a) $2^{2x+1} = 2^5$

b) $2^{x+7} = 4^{2x+5}$