Show your work to receive full marks.

Total: /29

Mrs. Behnke

MAP 4CI Quiz 1 – Algebraic Models

Name:_____

1. Simplify using the exponent laws, then evaluate. Give your answer as an integer or a fraction.

/6

a) $4^{-2} \times 4^{3} \times 4^{5}$ b) $5^{15} \div 5^{13}$ c) $\left(3^{4}\right)^{-1}$

2. Simplify the following exponential expressions using the Exponent Laws (remember: no negative exponents in your answers). Evaluate exactly where possible.

/6

a) $x^{4}\left(x^{5}\right)^{2}$ b) $\left(\frac{4}{5}\right)^{-3}$ c) $\left(x^{-3} \times x^{7}\right)^{3}$ d) $-\left(5^{0}\right)$

/9 e) $\left(x^{7}y^{9}\right) \div \left(x^{-3}y^{3}\right)^{2}$ f) $\left(10x^{6}y\right)^{3}$ g) $\left(-1203x^{-137}y^{9}\right)^{0}$

3. Express in radical form, then evaluate exactly.

a) $(-125)^{\frac{1}{3}}$ b) $243^{\frac{2}{5}}$ c) $(64)^{\frac{3}{2}}$

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