

Name _____

Due Date _____

Block _____

Practice Exponential Functions Test #1.1

Evaluate:

① $3 \cdot (-2^4)$

② $3(-2^3)$

③ $5 \cdot (-8)(2^2)^3$

Simplify. Write answers as the product of powers with no variables in the denominator.

④ $\left(\frac{4y^3}{2x^4}\right)^2 \cdot \left(\frac{2x^3}{16y^5}\right)$

⑤ $(3x^3)^4 \cdot 2x^5$

⑥ $(4x^2)^{1/2} \cdot 3x^5$

⑦ $\frac{\sqrt[3]{8x^9} \cdot 4}{3y^4}$

⑧ $\frac{\left(\sqrt[5]{32x^4y^3z^2}\right)^5}{3x^{-3}y^2z^{-2}}$

Solve. Write your answer in decimal form ~~up~~ to at least ~~the~~ the thousandth place.

⑨ $10^x = 243$

⑩ $10^{2x} = 10000$

⑪ $4^x = 9$

⑫ $2 \cdot 3^{4x} = 18$

⑬ $\log_4 X = 2$

⑭ $\log_x 27 = 3$

Use log rules to simplify:

⑮ $\log 4 + \log 25$

⑯ ~~$\log_2 2 + \log_2 2$~~ $\log_2 4 + \log_2 8$