Name: _____

Math 9: Exponent Rules Quiz

Answer the following questions to the best of your ability!

1) Write as a power:

a) $6^3 \times 6^7 =$ _____   **b)** $(-4)^2 \times (-4)^5 =$ _____   **c)** $25^3 \times 25^7 =$ _____

d) $3^0 \times 3^4 =$ _____   **e)** $(-5) \times (-5) =$ _____   **f)** $(-10)^2 \times (-10)^3 =$ _____

2) Write as a power:

a) $7^{10} \div 7^5 =$ _____   **b)** $(-3)^{10} \div (-3)^2 =$ _____   **c)** $9^6 \div 9 =$ _____

d) $\dfrac{8^{12}}{8^6} =$ _____   **e)** $\dfrac{(-2)^4}{(-2)} =$ _____   **f)** $\dfrac{(-5)^7}{(-5)^4} =$ _____

3) Evaluate. Write your answer in standard form.

a) $3^5 \times 3^0 =$ _____   **b)** $(-4)^4 \div (-4)^3 =$ _____

4) Write as a power.

a) $5^6 \times 5^6 \div 5^4 =$ _____   **b)** $(-6)^9 \div (-6)^4 \times (-6)^3 =$ _____

c) $(-3) \times (-3)^4 \times (-3)^8 =$ _____   **d)** $6^{12} \div 6^5 \div 6^2 =$ _____

e) $\dfrac{8^5 \times 8^2}{8^3 \times 8^1} =$ _____   **f)** $\dfrac{(-2)^3 \times (-2)^2}{(-2)^3 \times (-2)} =$ _____

5) Write as a power and then evaluate in standard form.

a) $5^4 \times 5^7 \div 5^8 =$ _____ = _____   **b)** $(-8)^5 \div (-8)^4 \times (-8)^2 =$ _____ = _____