Math 9

Name: _____
Date: _____

Sec. 1.4 Laws of Exponents (Part A)

1. Write each product as a single power.

a) $4^3 \times 4^2$ **b)** $5^0 \times 5^0$ **c)** $(-2)^2 \times (-2)^4$

d) $-6^3 \times 6^1$ **e)** $(-7)^0 \times (-7)^2$ **f)** $(-9)^6 \times (-9)^3$

2. Write each quotient as a single power.

a) $8^7 \div 8^5$ **b)** $10^4 \div 10^0$ **c)** $(-1)^6 \div (-1)^3$

d) $\dfrac{-3^4}{3^4}$ **e)** $\dfrac{(-9)^{10}}{(-9)^5}$ **f)** $2^3 \times 2^6 \div 2^9$

3. Express as a single power (if you can), then evaluate.

a) $2^2 \times 2^3 \div 2^0$ **b)** $(-5)^8 \div (-5)^6 \times (-5)$

c) $\dfrac{6^3 \times 6^5}{6^2 \times 6^4}$ **d)** $-2^2(2^3 \div 2^1) - 2^3$

4. Simplify, then evaluate.

a) $(-2)^6 \div (-2)^5 - (-2)^5 \div (-2)^3$

b) $4^3 \div 4^2 + 2^4 \times 3^2$

c) $3^2 + 4^2 \times 4^1 \div 2^3$

d) $\frac{3^4}{3^3} + \frac{4^2 \times 4^0}{2^4}$

5. Identify, then correct any errors in these answers.

a) $5^3 \times 5^2 = 5^6$

b) $2^3 \times 4^2 = 8^5$

c) $(-3)^8 \div (-3)^4 = (-3)^4$

d) $1^2 \times 1^4 - 1^3 = 1^3$

e) $\frac{4^2 \times 4^4}{4^2 \times 4^1} = 4^2$