

EXAM REVIEW GRADE 9
Unit 2 – Powers and Exponent Laws

Name: _____ Class: _____

1. Write as a single power.

a) $(-8)^6 \div (-8)^3$

b) $(7^3)^2 \times (7)^4$

2. Evaluate.

a) $3^3 - 4^2$

b) $-4^2 + 7^0$

3. Evaluate each of the following.

(A) 4^4

(B) -4^2

(C) $(-4)^2$

(D) $-(-4)^2$

4. Which statement is true?

(A) $(4^6)^3 = 4^9$

(B) $4^6 \times 4^3 = 7^{18}$

(C) $4^0 = 0$

(D) $\frac{4^6}{4^3} = 4^3$

5. Complete the table.

Power	Base	Exponent	Repeated Multiplication	Standard Form
			$-(4 \times 4 \times 4 \times 4 \times 4 \times 4)$	
$\left(-\frac{5}{3}\right)^4$				

6. Evaluate $(2^3)^2$ and $(2^3)(2^2)$ and explain why they are different.

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7. Evaluate. Show your work.

a) $\left[(4-10)^3 \times 3^5 \right]^0 + (6-2^2)$

b) $(4-16 \div 2^3)^4 - (6-3)^2$

8. Write as a single power and then evaluate.

a) $(5^2 \times 5^8) \div (5^3)^2$

b) $\frac{(-3)^7}{(-3)^2 \times (-3)^3}$

9. Using laws of exponents, simplify and then evaluate:

$$(3^3 \times 3)^2 + [(-2)^5 \div (-2)^2]^3$$

10. Identify and then correct any errors in the student's work below. Explain how you think the errors occurred.

$$(3^3 + 3^2)^2$$

$$= (3^5)^2$$

$$= 3^{10}$$

$$= 59049$$