

Name: _____

Chapter 2 Review

Show all of your work.

- Write as repeated multiplication, then in standard form.
 - 4^3
 - 7^2
 - $-(-2)^5$
- Write as a power, then in standard form.
 - $3 \times 3 \times 3 \times 3 \times 3 \times 3 =$
 - $(-8)(-8)(-8) =$
 - $-(2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2) =$
- Explain the difference between 5^8 and 8^5 .
- Is the value of -4^2 different from the value of $(-4)^2$? And is the value of -4^3 different from the value of $(-4)^3$?
- Write each number in standard form.
 - $(4 \times 10^3) + (7 \times 10^2) + (2 \times 10^1) + (9 \times 10^0) =$
 - $(3 \times 10^5) + (2 \times 10^2) + (8 \times 10^0) =$
- Evaluate:
 - $2^3 + (5 - 2)^4 =$
 - $100 \div 2 + (4 + 1)^3 =$
 - $(6^2 + 7^2)^0 - (8^4 + 2^4)^0 =$

7. Identify then correct any errors in the student work below.

$$(-2)^2 \times 2^3 - 3^2 \div (-3) + (-4)^2$$

$$=(-2)^5 - 9 \div (-3) + 16$$

$$= -32 - 3 + 16$$

$$= -35 + 16$$

$$= -19$$

8. Write each quotient as a power, then evaluate the power.

a. $7^5 \div 7^3$

b. $(-10)^9 \div (-10)^3$

c. $\frac{8^4}{8^2}$

9. Write each expression as a product or quotient of powers, then evaluate it.

a. $(3 \times 5)^3$

b. $(12 \div 3)^5$

c. $[(-4) \times 2]^4$

10. Write each expression as a power.

a. $(3^2)^3$

b. $(4^0)^6$

c. $[(-2)^3]^3$

11. Write each expression as a power, then evaluate.

a. $\frac{5^5}{5^3 \times 5^2}$

b. $\frac{(-4)^3 \times (-4)^6}{(-4)^2 \times (-4)^4}$

c. $\frac{10^6 \times 10^0}{10^3 \times 10^2}$

12. Simplify, then evaluate each expression.

a. $2^3 \times 2^2 - 2^0 + 2^4 \div 2^3$

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

c. $12^2 \times 12^4 \div (-2)^4 - 12^0$