Learning Outcomes Covered:

2D: I can apply the exponent law for a product of powers.

2E: I can apply the exponent law for a quotient of powers.

CONTENT Assessment Questions:

1. Write each product as a single power.
   a) $4^3 \times 4^2$ b) $5^0 \times 5^0$ c) $(-2)^2 \times (-2)^4$

   $= 4^5$ $= 5^0$ $= (-2)^6$

2. Write each quotient as a single power.
   a) $8^7 \div 8^5$ b) $10^4 \div 10^0$ c) $\frac{(-9)^{10}}{(-9)^5}$ d) $\frac{-3^4}{3^4}$

   $= 8^2$ $= 10^4$ $= (-9)^5$ $= -3^0$

3. Express as a single power.
   a) $2^3 \times 2^6 \div 2^9$ b) $(-5)^8 \div (-5)^4 \times (-5)^3$ c) $\frac{6^3 \times 6^5}{6^2 \times 6^4}$

   $= 2^9 \div 2^9$ $= (-5)^4 \times (-5)^3$ $= \frac{6^8}{6^6} = 6^2$

   $= 2^0$ $= (-5)^7$

4. Simplify, then evaluate.
   a) $4^3 \div 4^2 + 2^4 \times 2^2$ b) $(-2)^6 \div (-2)^5 - (-2)^5 \div (-2)^3$ c) $-2^2(2^3 \div 2^1) - 2^3$

   $= 4^1 + 2^6$ $= (-2)^1 - (-2)^2$ $= -2^2(2^2) - 2^3$

   $= 4 + 64$ $= -2 - 4$ $= -2^4 - 2^3$

   $= 70$ $= -6$ $= -16 - 8$

   $= -24$

Name: _____

CURRICULAR COMPETENCIES Questions:

1. Identify, then correct any errors in these answers. Explain how you think the errors occurred. (RA, US, CmRp)

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

$5^3 \times 5^2 = 5^5$

exponent was multiplied instead of added.

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

base are not the same, can't add exponents together.

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

Nothing was wrong.

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

$1^6 - 1^3 = 0$.

You cannot subtract exponent when you subtract power.

e) $\frac{4^7 \times 4^4}{4^2 \times 4^1} = 4^2$

$\frac{4^6}{4^3} = 4^3$

When you divide power with same base, you subtrat exponent instead of divide them.

ONGOING LEARNING ACTIVITIES:

CORE: Page 77: Curricular Competencies: 11, 12, 13aceg, 15, 16, 19
Page 76: Content: (4, 5, 10) do at least 3 of each question, 6, 8, 13bdf
ADVANCED: Page 78: 20, 21, 22