

Warm up

Oct 15

1. Express as a single power then evaluate.

$$\frac{2^8 \times 2^{12}}{2^2 \times 2^4} \quad (4)$$

2. Simplify using powers then evaluate.

$$\frac{6^2 \times 3^3 \times 6^1 \times 3^2 \times 6^3 \times 3^1 \times 6^0}{6^2 \times 3^0 \times 6^2 \times 3^2 \times 3^1} \quad (4)$$

solutions

Warm up

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1. Express as a single power then evaluate.

$$\begin{aligned} \frac{2^8 \times 2^{12}}{2^2 \times 2^4} &= 2^6 \times 2^8 \\ &= 2^{14} \\ &= 16\,384 \end{aligned} \quad \left. \vphantom{\frac{2^8 \times 2^{12}}{2^2 \times 2^4}} \right\} \begin{aligned} &= \frac{2^{20}}{2^6} \\ &= 2^{14} \end{aligned}$$

solutions

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2. Simplify using powers then evaluate.

$$\frac{6^2 \times 3^3 \times 6^1 \times 3^2 \times 6^3 \times 3^1 \times 6^0}{6^2 \times 3^0 \times 6^2 \times 3^2 \times 3^1}$$

$$\begin{aligned} &= \frac{6^6 \times 3^6}{6^4 \times 3^3} \\ &= 6^2 \times 3^3 \\ &= 36 \times 27 \\ &= 972 \end{aligned}$$

Concept reinforcement...

Powers Worksheet - Quotient Rule

Extra Practice 3 & 4



$$1. \frac{8m^6n^4}{2m^2n}$$

$$2. \frac{3m^4n^7}{6m^5n^2}$$

$$3. \frac{7a^6b^4}{49a^8}$$

$$1. \frac{8m^6n^4}{2m^2n} = 4m^4n^3$$

$$2. \frac{3m^4n^7}{6m^5n^2} = \frac{n^5}{2m} \quad \text{Grade 10} \quad \frac{1m^{-1}n^5}{2}$$

$$3. \frac{7a^6b^4}{49a^8} = \frac{1b^4}{7a^2} = \frac{b^4}{7a^2} \quad \frac{a^{-2}b^4}{7}$$

Use 'Quotient Rule'

Why Are Babies Like Hinges ?

Simplify each expression below and find your answer in the set of answers to the right of that exercise. Write the letter of your answer in the box that contains the number of that exercise.

① $\frac{n^8}{n^5}$	③ $\frac{2n^4}{n}$	Ⓐ $2n^4$	Ⓔ $2n^3$
② $\frac{n^{12}}{n^3}$	④ $\frac{6n^7}{3n^3}$	Ⓗ n^3	Ⓣ n^4
⑤ $\frac{x^3y^4}{x^2y}$	⑦ $\frac{8xy^2}{12x^2y^3}$	Ⓡ $-4x^2$	Ⓐ xy^3
⑥ $\frac{-8x^4y^2}{2x^3y^3}$	⑧ $\frac{20x^3y^4}{-5x^2y}$	Ⓢ $-4y^4$	Ⓣ $-4y^7$
⑨ $\frac{3a^4b^2}{9a^2b^3}$	⑪ $\frac{-24a^2b}{18ab^3}$	Ⓔ $\frac{2}{3x^2y^3}$	Ⓤ $\frac{2}{3xy^2}$
⑩ $\frac{-15a^2b^3}{-3ab}$	⑫ $\frac{30a^3b^2}{2a^4b^2}$	Ⓜ $5ab^3$	Ⓐ $15a^2$
⑬ $\frac{8u^4v^{10}}{-2u^2v^4}$	⑮ $\frac{-7u^2v^6}{uv^3}$	Ⓝ $5ab^6$	Ⓒ $15a^3$
⑭ $\frac{13u^7v^7}{26u^2v}$	⑯ $\frac{-9u^4v^2}{-6u^2v^4}$	Ⓝ $-\frac{4a}{3b^4}$	Ⓗ $\frac{a^3}{3b^3}$
⑰ $\frac{14k^3m^3}{2km^3}$	⑲ $\frac{-3k^4m^8}{k^4m^3}$	Ⓑ $-7uv^4$	Ⓢ $-4x^2y^2$
⑱ $\frac{4k^2m^2}{16k^4m^3}$	⑳ $\frac{12km^3}{-4m^3}$	Ⓓ $-7uv^3$	Ⓔ $-4u^2v^2$
		Ⓣ $\frac{v^8}{2}$	Ⓐ $\frac{3u^6}{2v^4}$
		Ⓔ $-3k$	Ⓛ $7k^6m$
		Ⓓ $7k^6$	Ⓡ $-3km^3$
		Ⓞ $\frac{1}{4k^2m}$	Ⓝ $\frac{1}{4km^2}$

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
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76 © 1993 Creative Publications OBJECTIVE 9-4: To divide monomials.

Attachments

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