

Exponent Properties Day 2

INTRO

1. Do a quick review of the exponent rules learned the day before:

$$a^m \cdot a^n = a^{m+n} \quad \frac{a^m}{a^n} = a^{m-n} \quad a^0 = 1 \quad a^{-n} = \frac{1}{a^n}$$

TASK #1

1. $(x^3)^4$ 2. $(5^2)^3$ 3. $(a^2b^7)^3$ 4. $(3xy^4)^2$

5. What pattern do you notice when an exponent is raised by another exponent?

TASK #2

1. $\frac{2}{5} \cdot \frac{2}{5} =$ 2. $\left(\frac{2}{5}\right)^2 =$ 3. $\left(\frac{x}{y}\right)^5 =$ 4. $\left(\frac{a^2b^4}{c^5}\right)^3 =$

TASK #3

1. $5^{-2} =$ 2. $x^{-3}y^5 =$ 3. $\frac{a^2b^{-3}}{c^{-5}} =$

TASK #4

1. $\left(\frac{15x^4y^3z^8}{5x^2y^{-6}z^0}\right)^{-3} =$

CHALLENGE TASK

Prove that 3^{2n+3} is equivalent to $27 \cdot (9)^n$

Exponent Properties – Notes to My Future Forgetful Self

<p><u>Guided Example:</u></p> $\left(\frac{x^3 y^6 z^{-5}}{x^4 y^{-2} z}\right)^2 = \left(\frac{y^b \cdot y^\square}{x^\square z \cdot z^\square}\right)^2$ $= \left(\frac{y^\square}{x^\square \cdot z^\square}\right)^2 = \frac{y^\square}{x^\square \cdot z^\square}$	<p><u>Example 1:</u></p> $\left(\frac{24a^3 b^{-5}}{8a^{-2} b^2}\right)^3 =$
<p><u>Things to Remember:</u></p>	<p><u>Example 2:</u> Create your own example and solve it.</p>

Exponent Properties – Notes to My Future Forgetful Self

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