

Review for Ch. 8. Quiz.

Feb. 27, 2007

Write this down NOW Please

Know the 5 Special Powers

- ① Product of Power
- ② Power of Power
- ③ Power of Product
- ④ Quotient of Power
- ⑤ Power of Quotient

Matching to the Definitions

Chapter 8
Test
Tomorrow

Monday ...
You need Index
Cards

Write the exp. as a single ~~Base~~ Power
of a Base

$$8^{13} \cdot 8^5 = 8^{13+5} = \underline{\underline{8^{18}}}$$

$$\begin{aligned} (x^2 y^3 z^2)^3 \cdot x^2 y &= x^6 y^9 z^6 \cdot x^2 y \\ &= \underline{x^8} \cancel{y^9} z^6 \cdot \underline{x^2} \cancel{y} \\ &= \underline{\underline{x^{10} y^8 z^6}} \end{aligned}$$

$5^0 = 1$
 $6^0 = 1$
 $7^0 = 1$
 $(\text{Pineapple})^0 = 1$

$0^0 = \underline{\underline{\text{undefined}}}$

$$(4^{-1})^{-2} \downarrow = \frac{1}{(4^{-1})^2} = \frac{1}{4^{-2}} \uparrow = 4^2 = \underline{\underline{16}}$$

$$(4^{-1})^{-2} = 4^2 = \underline{\underline{16}}$$



$$a b^3 c^2 = \frac{a c^2}{\underline{\underline{b^3}}}$$

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$$\left(\frac{-3}{5}\right)^3 = \frac{(-3)^3}{5^3} = \frac{-27}{125}$$

Something from the top must cancel or reduce w/ something from the bottom

$$\frac{49x^2z^3}{xz^2} \cdot \frac{xz^2}{17} = \frac{7x^8z^4}{17}$$

$$\begin{aligned}
 & \frac{8x^2y^2}{2x^2y^2} \left(\frac{4x^2y^4}{6x^2y^2} \right)^{-4} \\
 &= \frac{8x^2y^2x^2y^6}{2} \cdot \left(\frac{4x^2y^4}{6x^2y^2} \right)^{-4} \\
 &= \frac{8x^2y^2x^2y^6}{2} \cdot \frac{(6x^2y^2)^4}{(4x^2y^4)^4} \\
 &= \frac{8x^2y^2x^2y^6}{2} \cdot \frac{6^4(x^2)^4(y^2)^4}{4^4(x^2)^4(y^4)^4} \\
 &= \frac{81x^4}{4}
 \end{aligned}$$

$$\begin{array}{r}
 \frac{6}{36} \\
 \frac{6}{216} \\
 \frac{6}{1296} \\
 \frac{4}{4} \\
 \frac{4}{16} \\
 \frac{4}{64} \\
 \frac{4}{256}
 \end{array}$$

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$$\frac{-10xy^8}{2x^4y^2} \cdot \frac{-5xy^{-2}}{(-y)^3}$$

$$= \frac{-10xy^8}{2x^4y^2} \cdot \frac{-5x}{(-1 \cdot y)^3 y^2}$$

$$= \frac{-\cancel{10}x^{\cancel{1}}y^{\cancel{8}}}{\cancel{2}x^{\cancel{4}}y^{\cancel{2}}} \cdot \frac{-\cancel{5}x}{(\cancel{-1})^3 y^{\cancel{3}} y^{\cancel{2}}} = \frac{-25y}{x^2}$$

Study for
the Test
Tomorrow!!