

Review for Ch. 8. Quiz.

Feb. 27, 2007

Copy Now!

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

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

$$\begin{aligned}
 (x^2 z)^3 \cdot x^2 y &= x^3 (z^2)^3 z^3 \cdot x^2 y \\
 &= \underline{x^3} \underline{z^6} \underline{z^3} \cdot \underline{x^2} \underline{y} \\
 &= \underline{\underline{x^5 y z^9}}
 \end{aligned}$$

$$5^0 = 1$$

$$6^0 = 1$$

$$7^0 = 1$$

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

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

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

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

$$ab^{-3}c^2 = \frac{ac^2}{b^3}$$

20

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

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

$$\frac{49x^9z^3}{x^2z} \cdot \frac{xz^2}{7} =$$

$$\frac{8x^2y^2}{2x^2y^6} \left(\frac{4x^2y^4}{6x^2y^2} \right)^{-4}$$

$$= \frac{8x^2y^2 \cdot x^2y^6}{2} \cdot \frac{(4x^2y^4)^{-4}}{(6x^2y^2)^{-4}}$$

$$= \frac{8x^2y^2x^2y^6}{2} \cdot \frac{(6x^2y^2)^4}{(4x^2y^4)^4}$$

$$\begin{array}{r} 32 \\ 8 \overline{) 256} \\ \underline{24} \\ 16 \end{array}$$

$$81 + 62324648$$

$$= \frac{18x^2y^2x^2y^6}{2} \cdot \frac{6^4(x^2)^4(y^2)^4}{4^4(x^2)^4(y^4)^4}$$

$$48 + 632$$

$$\begin{array}{r} 6 \\ 3 \overline{) 36} \\ \underline{36} \\ 0 \end{array}$$

$$\begin{array}{r} 36 \\ 2 \overline{) 36} \\ \underline{216} \\ 6 \end{array}$$

$$\begin{array}{r} 4 \\ 4 \overline{) 1296} \\ \underline{4} \\ 6 \\ 6 \overline{) 36} \\ \underline{36} \\ 0 \end{array}$$

$$\begin{array}{r} 4 \\ 4 \overline{) 216} \\ \underline{168} \\ 48 \\ 4 \overline{) 48} \\ \underline{40} \\ 8 \\ 4 \overline{) 80} \\ \underline{80} \\ 0 \end{array}$$

$$= \frac{81x^4}{4}$$

32B

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

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

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

Study for
the Test
Tomorrow!!