

Notes Part 2

Quotient Properties of Exponents



1) $\left(\frac{2x^2y^3}{3xy}\right)^3 = \frac{2^3x^6y^9}{3^3x^3y^3} = \frac{8x^3}{27}$

$\frac{2^3x^3}{3^3}$

2) $\left(\frac{3x^2y^3}{xy}\right)^4 = \frac{3^4x^8y^{12}}{x^4y^4} = \frac{81x^4y^8}{1}$

$81x^4y^8$
 $3^4x^4y^8$

3) $\frac{3x^5y^7}{2xy^4}$

3) $\frac{1 \cdot x^{20}}{x^5 \cdot 1} = \frac{x^{20}}{x^5} = \frac{x^{15}}{1} = x^{15}$

4) $\frac{4x \cdot 2x^3}{5y \cdot y^2} = \frac{8x^4}{5y^3}$

$\frac{1}{2} \cdot \frac{3}{4} = \frac{3}{8}$

6) $\frac{3xy^4 \cdot 2x^2y^2}{4x^3 \cdot 1y^2} = \frac{6x^3y^6}{4x^3y^2} = \frac{3y^4}{2} \cdot \frac{1y^4}{1}$

$\frac{6}{4} = \frac{3}{2}$ $\frac{6/2}{4/2} = \frac{3}{2}$

7) 6) $\frac{(2x)^3}{3} \cdot \frac{4x^2}{x} \Rightarrow \frac{2^3x^3}{3} \cdot \frac{4x^2}{x} = \frac{32x^5}{3x^1}$

$\frac{32x^4}{3}$

8) $\frac{7x^8y^{11}}{x^2y^1} \cdot \frac{12x^4y}{3x^2y^1} = \frac{84x^{12}y^{12}}{3x^4y^2}$

$\frac{84x^8y^{10}}{3} = \frac{28x^8y^{10}}{1} = 28x^8y^{10}$