

Part C

What would your strategy be if the entire fractional expression is raised to a power?

Simplify $\left(\frac{6x^4y^3}{4x^3y^5}\right)^3$.

1. Applying the exponent first –

- a. Apply the exponent to everything within the parentheses first. What do you get? (Your answer here should be a fractional expression)

$$\left(\frac{6x^4y^3}{4x^3y^5}\right)^3 = \underline{\hspace{10em}}$$

- b. Simplify the expression above that you got by applying the 3rd power to the entire fractional expression.
- c. Final simplified answer?

2. Simplify within the parentheses first –

- a. Simplify within the parentheses first. What do you get?

$$\left(\frac{6x^4y^3}{4x^3y^5}\right)^3 = \left(\hspace{2em} \right)^3$$

- b. Apply the 3rd power to your simplified expression.
- c. Final simplified answer?

What do you think?

When you have a fractional expression raised to a power, is it more efficient to apply the exponent first then simplify, or to simplify first and then apply the exponent?

