

Complex Fractions

Video 2: More Complicated Examples

Complex fractions look like this:

$$\frac{\frac{4x}{15y^2}}{\frac{6x^4}{25y^8}} \quad \text{or} \quad \frac{\frac{1}{3} - \frac{1}{6}}{\frac{3}{2} + \frac{5}{6}} \quad \text{or} \quad \frac{\frac{4}{x^2} - \frac{4}{y^2}}{\frac{1}{xy} + \frac{5}{y}}$$

First we will discuss the basics.

Examples

a. $\frac{\frac{1}{x^2} - \frac{1}{y}}{\frac{3}{x} - \frac{4}{y^2}}$

b. $\frac{\frac{3}{x} - x}{\frac{2}{x} + x}$

Examples

a.
$$\frac{\frac{3}{x-1} - \frac{2}{x+3}}{\frac{5}{x+3} - \frac{2}{x-1}}$$

b.
$$\frac{\frac{5}{x-2} - \frac{3}{x+5}}{\frac{1}{x+5} + \frac{2}{x-2}}$$

Examples

a.
$$\frac{1 - \frac{1}{x+5}}{\frac{x}{x-5} + \frac{4}{x^2-25}}$$

b.
$$\frac{1 + \frac{12}{x^2-16}}{\frac{x}{x+4} - \frac{6}{x-4}}$$

c.
$$\frac{\frac{1}{x+2} + \frac{4}{x^2-4}}{\frac{3}{x-2} + 1}$$