

Reducing Fractions



Preliminaries

- Factor polynomials

$$\frac{x^2 + 3x + 2}{x^2 - 3x - 4} =$$

Objectives

- Reduce fractions

Recap

- Factor numerator and denominator
- Cancel common factors
- Do not cancel terms which are added. You can only cancel multiplication factors. It may help to always put factors in parentheses.

$$\frac{x^2 + 3x + 2}{x^2 - 3x - 4} = \frac{(x + 1)(x + 2)}{(x - 4)(x + 1)} = \frac{x + 2}{x - 4}$$

$$\frac{3x^3 - 12x}{6x^2 - 12x} = \frac{(3)(x)(x + 2)(x - 2)}{(6)(x)(x - 2)} = \frac{x + 2}{2}$$

Recap

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