Reducing Fractions

UNIVERSITY OF MINNESOTA

Preliminaries and Objectives

Preliminaries

- Factor polynomials

Objectives

- Reduce fractions

Example 1

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

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.

Example 1

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

Example 2

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

Recap

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