

REWRITING RATIONAL EXPRESSIONS

A **Rational Expression** is the ratio of two polynomials such that the denominator cannot be zero.

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

Rewriting Rational Expression with a common Integer Factor

EXAMPLE

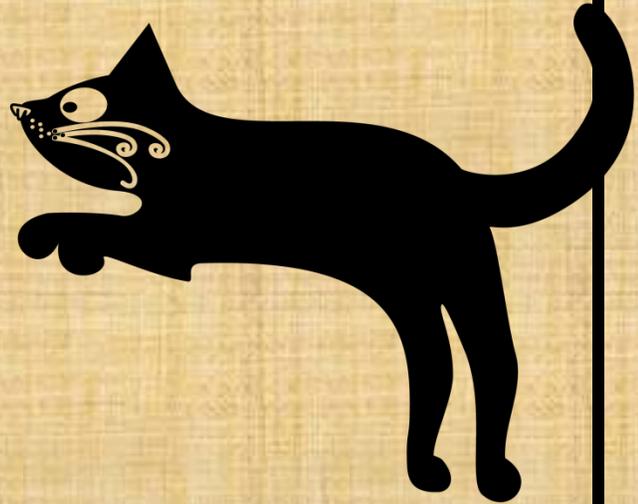
SIMPLIFY $\frac{4x-2}{6x}$

$$\frac{4x-2}{6x} = \frac{2(2x-1)}{2(3x)}$$

Factoring out the GCF of numerator and denominator, which is 2

$$= \frac{2x-1}{3x}$$

Cancelling the common factor



Rewriting Rational Expression with a common Algebraic Factor

EXAMPLE

SIMPLIFY $\frac{9x^2-6x}{12x}$

$$\frac{9x^2-6x}{12x} = \frac{3x(3x-2)}{3x(4)}$$

Factoring out the GCF of numerator and denominator, which is 3x

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

Cancelling the common factor

Meets: Common Core Standard High School – HSA-APR.D.6