Name _____ Date _____

Rewriting Rational Expressions - Guided Lesson Explanation

Explanation#1

$$\frac{6x + 36}{12x - 18}$$

$\frac{6(x+6)}{6(2x-3)}$ Factor out the GCF of numerator and denominator, which is 6

$\frac{\cancel{6}(x+6)}{\cancel{6}(2x-3)}$ The 6s cancel.

$\frac{(x+6)}{(2x-3)}$ We are in the simplest form.

Explanation#2

$2x^2 + 6x$ Factor each level

$4x^3 - 8x$

$2x(x + 3)$ Cancel 2x's

$4\ x(x^2 - 2)$

$(x + 3x)$ We are in the simplest form.

$(2x^2 - 4)$

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Explanation # 3

$\frac{k}{k^2 + 3k}$.

$\frac{k}{k(k + 3)}$ Factor out the GCF of the denominator, which is k.

$\frac{\cancel{k}}{\cancel{k}(k + 3)}$ Cancel the common or like factors (k).

$\frac{1}{(k + 3)}$ Simplify

So the answer is $\frac{1}{(k + 3)}$