5.1

Date: 11/9/23

Objective: I can simplify a rational fraction.

Review

Rational Number: a # that can be written as a fraction

Expression: math phrase, no =

Rational Expression: math phrase with var in denominator

Simplify: $\frac{6}{8}$

WAY 1: $\frac{6 \div 2}{8 \div 2} = \frac{3}{4}$

WAY 2:

$$\frac{6}{8} = \frac{2 \cdot 3}{2 \cdot 2 \cdot 2} = \frac{3}{4}$$

Steps for simplifying rational expressions

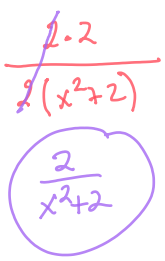
1. FACTOR!!!!!!! Types:

2. Make ones.

3. Write what is left. DO NOT MULTYPLY!

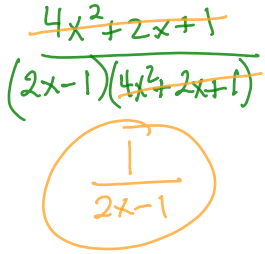
EXAMPLES: Simplify.

1. $\frac{4}{2(x^2+2)}$

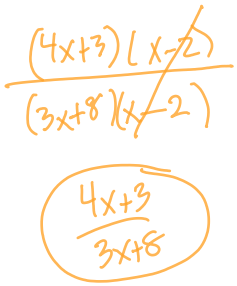


2. $\frac{(x+4)(x-3)}{(x-6)(x+4)}$

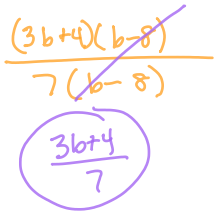
3. $\frac{4x^2+2x+1}{8x^3-1}$

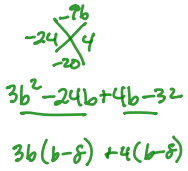


4. $\frac{(4x+3)(x-2)}{3x^2+2x-16}$

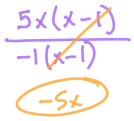


5. $\frac{3b^2-20b-32}{7b-56}$



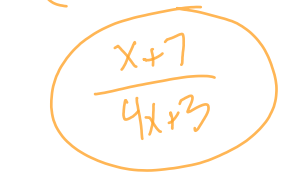


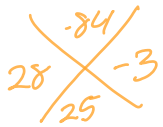
6. $\frac{5x^2-5x}{1-x}$

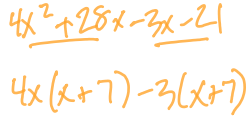


7. $\frac{r-3}{r^2-6r+9}$

8. $\frac{4x^2+25x-21}{16x^2-9}$







9. $\frac{v^2+11v+28}{v^2+15v+56}$