

2.2 Adding and Subtracting Rational Expressions - Lesson

MCR3U

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a) $\frac{1}{6} + \frac{1}{5}$

Note: the product of the denominators will give a common denominator (but not always the lowest common denominator)

b) Simplify and state restrictions

$$\frac{x^2-1}{x^2-4} \times \frac{x^2+3x-4}{x^2+5x+4}$$

c) $\frac{2x}{3y} + \frac{y}{6x}$

Add and Subtract Rational Expressions With Monomial Denominators

a) $\frac{1}{5x} + \frac{1}{2x}$

b) $\frac{ab^2+2}{2ab^2} - \frac{b+2}{2b}$

Add and Subtract Rational Expressions with Polynomial Denominators

a) $\frac{x+5}{x-3} + \frac{x-7}{x+2}$

1. get a common denominator
2. expand numerators
3. add/subtract fractions
4. simplify where possible
5. state restrictions (throughout process)

b) $\frac{x+9}{x^2+2x-48} - \frac{x-9}{x^2-x-30}$

c) $\frac{x-2}{x+2} + \frac{x+10}{x^2+6x+8}$

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

e) $\frac{a+1}{5-2a} - \frac{a-4}{2a-5}$