

6.4 Rational Expressions Addition & Subtraction

Need To Know



- Review addition and subtraction of fraction
- Add and subtract rational expression without the same denominator

Add & Subtract Fract.- Review

$$\frac{1}{21} + \frac{2}{9}$$

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

Find LCD by Factoring

- Prime factor each denominator
- Multiply together each factor that occurs
- Use the greatest exponent in any one of the factorizations

How to + or – fraction

1. _____
2. _____
3. _____
4. _____



Add & Subtract Rat. Expression

Add $\frac{7}{3x+6} + \frac{x}{x+2}$

Find LCD by Factoring

- Prime factor each denominator
- Multiply together each factor that occurs
- Use the greatest exponent in any one of the factorizations

How to + or – fraction

1. Find the LCD
2. Rename each fraction (use the “fancy one”)
3. Add numerators
4. Reduce



Add & Subtract Rat. Expression

Add $\frac{1}{x-3} + \frac{-6}{x^2-9}$

Find LCD by Factoring

- Prime factor each denominator
- Multiply together each factor that occurs
- Use the greatest exponent in any one of the factorizations

How to + or – fraction

1. Find the LCD
2. Rename each fraction (use the “fancy one”)
3. Add numerators
4. Reduce



Add & Subtract Rat. Expression

Add $\frac{5}{x^2 - 7x + 12} + \frac{1}{x^2 - 9}$

Find LCD by Factoring

- Prime factor each denominator
- Multiply together each factor that occurs
- Use the greatest exponent in any one of the factorizations

How to + or – fraction

1. Find the LCD
2. Rename each fraction (use the “fancy one”)
3. Add numerators
4. Reduce



Add & Subtract Rat. Expression

Subt. $\frac{x}{x^2 + 5x + 6} - \frac{2}{x^2 + 3x + 2}$

Find LCD by Factoring

- Prime factor each denominator
- Multiply together each factor that occurs
- Use the greatest exponent in any one of the factorizations

How to + or – fraction

1. Find the LCD
2. Rename each fraction (use the “fancy one”)
3. Add numerators
4. Reduce



Add & Subtract Rat. Expression

Add: $\frac{m+2}{m-7} + \frac{3-m}{49-m^2}$

Find LCD by Factoring

- Prime factor each denominator
- Multiply together each factor that occurs
- Use the greatest exponent in any one of the factorizations

How to + or - fraction

1. Find the LCD
2. Rename each fraction (use the "fancy one")
3. Add numerators
4. Reduce

end

