

## 6.3 Rational Expressions

Addition &  
Subtraction

### Need To Know



- Review Addition and Subtraction of Fraction with Same Denominator.
- Find the Least Common Multiple for Polynomial Expressions (same as LCD)

## Add and Subtract Fractions

$$\frac{7}{20} - \frac{3}{20}$$

$$\frac{2}{z} + \frac{3}{z}$$

Recall:

$$\frac{a}{c} + \frac{b}{c} = \frac{a+b}{c}$$



## Add and Subtract Fractions

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$$\frac{y^2 + 6y}{y + 2} + \frac{2y + 12}{y + 2}$$

$$\frac{x - 7}{x^2 + 3x - 4} - \frac{2x - 3}{x^2 + 3x - 4}$$



## Finding the LCD

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$$\frac{5}{18} + \frac{7}{24}$$

There are three ways to find LCD's

1. Use intuition
2. Use a list of multiples
3. Use the prime factoring method



## Least Common Denominator

Find the LCD:

18 and 24

$6a^2b^7$  and  $9a^5b^2$

### Find LCD by Factoring

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



## Least Common Denominator

Find the LCD:

$y^3 - y^2$  and  $y^4 - y^2$

$2x^2 + 5x + 2$  and  $2x^2 - x - 1$

### Find LCD by Factoring

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

end