

6.3 Add/Subtract Rational Expressions with Monomial Denominators

Remember — common denominators

$$\textcircled{1} \quad \frac{1}{4} + \frac{2}{4} = \frac{3}{4} \text{ lowest terms!}$$

$$\textcircled{2} \quad \frac{4^{\times 2}}{5^{\times 2}} - \frac{7}{10} = \frac{8}{10} - \frac{7}{10} = \frac{1}{10}$$

$$\textcircled{3} \quad \frac{2^{\times 8}}{3^{\times 8}} + \frac{5^{\times 3}}{8^{\times 3}} = \frac{16}{24} + \frac{15}{24} = \frac{31}{24}$$

$$\text{ex. 1} \quad \frac{1}{x} + \frac{5}{x} - \frac{3}{x} = \frac{3}{x}$$

$x \neq 0$

$$2. \quad \frac{1 \cdot 2}{x \cdot 2} + \frac{5}{2x} - \frac{3 \cdot 2}{x \cdot 2}$$

LCD
 $2x$

$x \neq 0$

$$= \frac{2 + 5 - 6}{2x} = \frac{1}{2x}$$

$$3. \quad \frac{2x \cdot 3x}{7 \cdot 3x} + \frac{5 \cdot 7}{3x \cdot 7}$$

LCD
 $21x$

$$= \frac{6x^2 + 35}{21x}$$

$$4. \quad \frac{3x(x+5)}{3x \cdot 8x} + \frac{4(x-7)}{4 \cdot 6x^2}$$

$$\text{LCD} \\ 24x^2$$

$$= \frac{3x^2 + 15x + 4x - 28}{24x^2}$$

$$= \frac{3x^2 + 19x - 28}{24x^2}$$

$$5. \quad \frac{5(3c-2)}{5 \cdot 3c} - \frac{3(c+8)}{3 \cdot 5c}$$

$$\text{LCD} \\ 15c$$

$$= \frac{5(3c-2) - 3(c+8)}{15c}$$

$$= \frac{15c - 10 - 3c - 24}{15c}$$

$$= \frac{12c - 34}{15c}$$

$$= \frac{12c - 34}{15c}$$

pss1 # 3, 5-10 (min 2 from each)
11b, 12b, 13b