

pp 562-3 #12

$$\frac{3}{x-6}$$

Strategy :

- ① simplify sums/differences of fractions to a single fraction

#18

$$\frac{5x^2+14x-12}{(x-3)(x+2)^2}$$

$$x \neq 3 \quad x \neq -2$$

#22

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

- ② convert  $\div$  to  $\cdot$

#11 
$$\frac{-3}{\frac{5}{x} + y}$$

LCM:  $x$

$$\frac{-3}{\frac{5}{x} + \frac{y \cdot x}{1 \cdot x}}$$

$$\frac{-3}{\frac{5}{x} + \frac{xy}{x}}$$

$$\frac{-3}{\frac{5+xy}{x}} = -3 \div \frac{5+xy}{x}$$

$$= \frac{-3}{1} \cdot \frac{x}{5+xy}$$

$$= \frac{-3x}{5+xy}$$

$$\#13 \quad \frac{2}{x+4} + 2$$

$$\frac{1 + \frac{3}{x+4}}$$

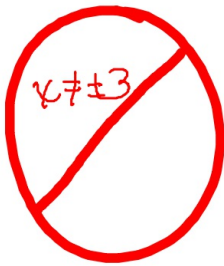
$$\frac{\frac{2}{x+4} + \frac{2}{1} \cdot \frac{x+4}{x+4}}$$

$$\frac{\frac{1}{1} \cdot \frac{x+4}{x+4} + \frac{3}{x+4}}$$

$$\frac{2}{x+4} + \frac{2x+8}{x+4}$$

$$\frac{x+4}{x+4} + \frac{3}{x+4}$$

$$\frac{2x+10}{x+4} = \frac{2x+10}{x+4} \cdot \frac{x+4}{x+4} = \frac{2x+10}{x+7}$$



$$\#17 \quad \frac{-3x}{x^2-9} + \frac{4}{2x-6}$$

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

$$\text{LCM} = (x+3)(x-3)(2) \quad \frac{-3x}{(x+3)(x-3)} \cdot \frac{2}{2} + \frac{4}{2(x-3)} \cdot \frac{(x+3)}{x+3}$$

$$\frac{-6x+4x+12}{2(x+3)(x-3)} = \frac{-2x+12}{2(x+3)(x-3)}$$

4.

$$= \frac{-x+6}{(x+3)(x-3)}$$