6.4 Adding/Subtracting Rationals with Binomial/Trinomial Denominators-part 2

ex. 1

$$\frac{2}{e-3} - \frac{3e}{9-e^2}$$ FACTOR!!

$(3-e)(3+e)$

$-(e-3)(3+e)$

$$= \frac{2(3+e)}{(e-3)(3+e)} + \frac{3e}{(e-3)(3+e)}$$

LCD $(e-3)(3+e)$

$$= 6 + 2e + 3e$$

$$\boxed{= \frac{6+5e}{(e-3)(3+e)}}$$

2. $$\frac{\cancel{(n-3)}\,1}{n^2+3n-18} - \frac{(n-2)}{n^2+n-20}$$ FACTOR

$\boxed{(n+6)\cancel{(n-3)}}$ $\quad (n+5)(n-4)$

LCD $(n+6)(n+5)(n-4)$

$$= \frac{1(n+5)(n-4)}{(n+6)(n+5)(n-4)} - \frac{(n-2)(n+6)}{(n+5)(n-4)(n+6)}$$

$$= n^2 - 4n + 5n - 20 - (n^2 + 6n - 2n - 12)$$

$$= n^2 + n - 20 - n^2 - 4n + 12$$

$$= n^2 + n - 20 - n^2 - 4n + 12$$

$$= \frac{-3n - 8}{(n+6)(n+5)(n-4)}$$

3. $$\frac{1 \cancel{n-2}}{n^2-5n+6} + \frac{n+4}{n^2-11n+30}$$

$$(n-3)\cancel{(n-2)} \qquad (n-6)(n-5)$$

FACTOR

LCD

$(n-3)(n-6)(n-5)$

$$= (n-6)(n-5) + (n+4)(n-3)$$

$$= n^2 - 5n - 6n + 30 + n^2 - 3n + 4n - 12$$

$$= \frac{2n^2 - 10n + 18}{(n-3)(n-6)(n-5)}$$

factor ??? $2(n^2-5n+9)$

p567 # 10, 12, 13

BEDMAS