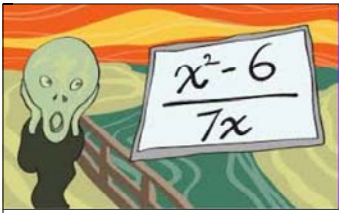
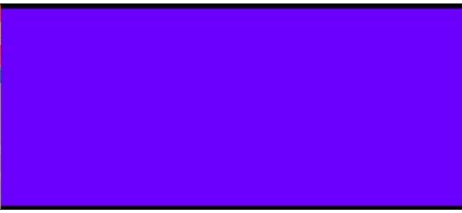
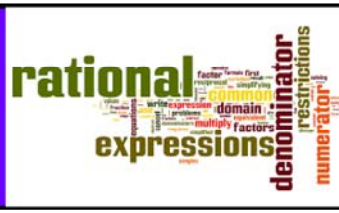


2.4 Add & Subtract Binomial Trinomial Denominators.notebook

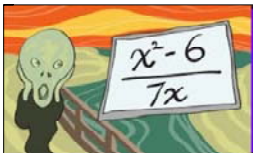






2.4 Add & Subtract With Binomial Denominators

Steps:

1. Factor First! { GCF
diff of squares
2. State NPV's.
3. Find the LCM and create a common denominator.
4. Simplify.

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Ex.) Simplify.

a) $\frac{(n-5) \cdot 4n}{(n-5)(n+4)} + \frac{3n(n+4)}{(n-5)(n+4)}$

LCM: $(n+4)(n-5)$

$$= \frac{4n^2 - 20n + 3n^2 + 12n}{(n+4)(n-5)}$$

$$= \frac{7n^2 - 8n}{(n+4)(n-5)}$$

$n \neq -4, 5$

b) $\frac{1}{\sqrt{x^2-36}} - \frac{1}{6x-x^2}$ *

$(x-6)(x+6)$

$-x(-6+x)$

$$x \cdot \frac{1}{x(x-6)(x+6)} + \frac{1}{x(x-6)(x+6)}(x+6)$$

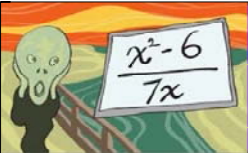

LCM: $x(x-6)(x+6)$

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

$$= \frac{2x+6}{x(x-6)(x+6)} \quad x \neq \pm 6, 0$$

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2.4 Add & Subtract Binomial Trinomial Denominators.notebook

Ex.) Simplify.

$$\frac{(p+1)(p-2)}{(p+1)(p-2)} + \frac{(p+3)(p-2)}{(p+1)(p-2)}$$

$$\text{LCM: } (p+1)(p-2)$$

$$= \frac{\cancel{p^2} - \cancel{p} + \cancel{2} - 1 + \cancel{p^2} - 2\cancel{p} + 3\cancel{p} - 6}{(p+1)(p-2)}$$

$$= \frac{2p^2 + p - 7}{(p+1)(p-2)} \quad p \neq -1, 2$$

$$\text{b) } \frac{2}{(e-3)} - \frac{3e}{9-e^2}$$

$$= \frac{2}{(e-3)} - \frac{3e}{-1(-9+e^2)}$$

$$= \frac{2}{(e-3)} + \frac{3e}{-1(e^2-9)}$$

$$\text{LCM: } (e+3)(e-3)$$

$$= \frac{2e+6+3e}{(e+3)(e-3)}$$

$$= \frac{5e+6}{(e+3)(e-3)} \quad e \neq \pm 3$$

Pg. 249 # 1cd, 2, 3bcd, 5-9.

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