$$\frac{4xy^2 \div y}{7y \div y}$$

$$\frac{4}{7}x$$

$$\frac{x^2-3x-4}{x^2-1}$$

we can't cancel things that are added or subtracted.

WE MUST FACTOR!

$$\frac{x^2-3x-4}{x^2-1} = \frac{(x+1)(x-4)}{(x+1)(x-1)}$$

$$\frac{x-4}{x-1}$$

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

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

$$(3x-5x^2-2x^3)(6x^2-5x+1)^{-1}$$

neg exp means move to the denominator

$$\frac{3x-5x^2-2x^3}{6x^2-5x+1}$$

$$\frac{-2x^3-5x^2+3x}{6x^2-5x+1}$$

$$\frac{-x(2x^2+5x-3)}{6x^2-5x+1}$$

num: $-x(2x-1)(x+3)$

$2 \cdot 3 + 1 \cdot -5$

$6 - 1$

denom: $6x^2-5x+1$

$6x, x$ $\quad (2x-1)(3x-1)$

$2x, 3x$ $\quad 6x^2-2x-3x+1$

$6x^2-5x+1$ ✓

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

$$\frac{-x(x+3)}{3x-1}$$

Another way

$$(3x - 5x^2 - 2x^3)(6x^2 - 5x + 1)^{-1}$$

$$\frac{3x - 5x^2 - 2x^3}{6x^2 - 5x + 1}$$

$$\frac{x(3 - 5x - 2x^2)}{(6x^2 - 5x + 1)} \quad 2 \cdot 3 = \frac{6}{1}$$

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

$1 - 2x \rightarrow 2x - 1$

$-(-1 + 2x)$

$-(2x - 1)$

$A - B = -(B - A)$

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

$$\frac{-x(3+x)}{3x-1}$$