Algebra II

5-4

Rational Algebraic Expressions

Fraction

Simplify. (pg 228)

1) $\frac{5x^2 - 15x}{10x^2} = \frac{5x(x-3)}{10x^2} = \frac{x-3}{2x}$

5x

$\frac{x-3}{2x}$

17) $\dfrac{(z^4 - 1)(z^4 - z^2)^{-1}}{}$

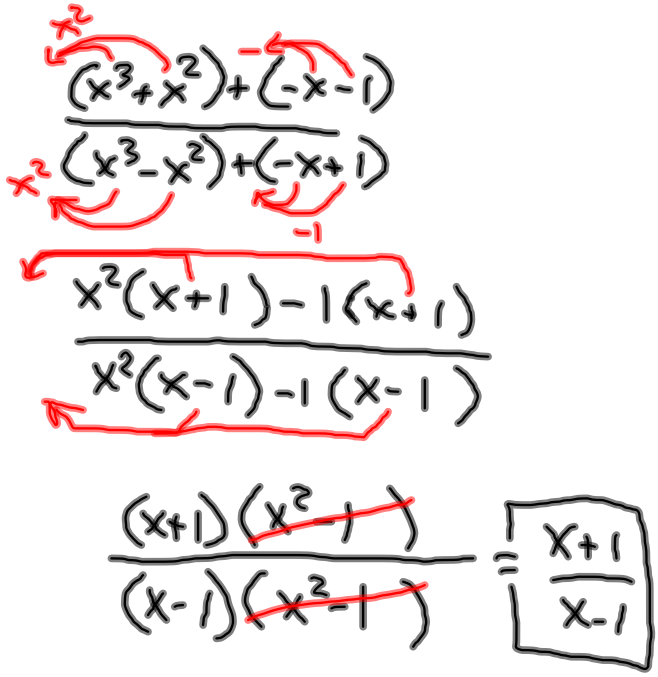
can't bring in over a + or −

$= \dfrac{z^4 - 1}{(z^4 - z^2)^1} = \dfrac{(z^2+1)(z^2-1)}{z^2(z^2-1)}$

you can reduce if it's factored

$= \boxed{\dfrac{z^2+1}{z^2}}$

29) $\dfrac{x^3 + x^2 - x - 1}{x^3 - x^2 - x + 1}$



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

Pg 228

2-20even

30-40even