

**Pg. A36 0.4B – Rational Expressions**

**Note:** Almost anything multiplied by its reciprocal is 1.

**Ex 1:**

Simplify the complex fraction.

$$\frac{\left( \frac{t^2}{\sqrt{t^2+1}} - \sqrt{t^2+1} \right)}{t^2}$$

**Ex 2:**

Factor the expression by removing the common factor with the smaller exponent.

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

**Ex 3:**

Simplify the expression.

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