

# Math 1010 - Quiz 6

University of Utah

Fall 2009

**Name:** *SOLUTIONS*

1. Factor the polynomial: (5 points)

$$x^2 + 5x + 6$$

$$x^2 + 5x + 6 = (x + 2)(x + 3)$$

2. Factor the polynomial: (5 points)

$$x^2 + 11x + 30$$

$$x^2 + 11x + 30 = (x + 5)(x + 6)$$

3. Simplify the given rational function, and state its domain:

$$\frac{x^2 + 2x}{x^2 - 4}$$

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

The domain is  $x \neq \pm 2$ .