Notes:

Factor.

1. $2x^2 - 3x + 1$ 2. $4x^2 - 9$ 3. $5x^2 + 6x + 1$

_____ – the quotient of two polynomials.

_____ – the numerator and denominator of a rational expression have no common factor

1. What is $\frac{x^2 - 6x - 16}{x^2 + 5x + 6}$ in simplest form? State restrictions on the variable.

2. What is the product $\frac{x^2 - 25}{x^2 + 4x + 3} \cdot \frac{x^2 + x - 6}{x - 5}$ in simplest form? State any restrictions on the variable.

3. What is the quotient $\frac{x^2 + 5x + 4}{x^2 + x - 12} \div \frac{x^2 - 1}{2x^2 - 6x}$ in simplest form? State any restrictions on the variable.

4. Find the product in simplest form of:

$$\frac{\left(2x^2+7x-15\right)}{\left(4x^2-8x+3\right)}\cdot\frac{\left(2x^2+x-1\right)}{\left(x^2+6x+5\right)}$$

5. Find the quotient in simplest form of:

$$\frac{\left(12x^2-22x+8\right)}{\left(3x\right)}\div\frac{\left(3x^2+2x-8\right)}{\left(2x^2+4x\right)}$$