Homework: pg 112 #1, 2, 3, 5, 6bde, 7, 8, 10, (14)

**Evaluating and Simplifying Rational Expressions**

Rational Expression – any quantity that can be expressed in the form

where p and q are polynomials and/or integers and

.

Ex; , x3 – 125, , 5.32, etc,…

The constant π would be a non-example since π = 3.141592… cannot be written in the form with ‘p’ as an integer.

Example 1

Evaluate f(3).

a) b) c)

Notice in example c) that f(3) cannot be evaluated since the denominator is equal to \_\_\_\_\_\_ when x = 3. For , x cannot be assigned the value 3. This is called a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and so we state that \_\_\_\_\_\_\_\_\_\_\_.

Example 2

State the restrictions for the following rational expressions.

a) b) c)

d) e)

Example 3

Simplify and state the restrictions.

a) b) c)

d) e) f)