Examples of rational numbers: a) b) c)

Examples of rational expressions: a) b) c)

d) e) f)

**RESTRICTIONS**

Because the denominator cannot equal 0, we must **restrict** values of x so that the denominator does not equal 0.

Restrict the following rational expressions:

a) 5 - x ≠ 0, so x ≠ 5 d)

b) 0, so x ≠ 0 e) no

c) 9 - x2 ≠ 0, so x ≠ ±3 f) (x 0, so x≠1,-5

**SIMPLIFYING RATIONAL EXPRESSIONS**

|  |
| --- |
| 1) Common factor or factor the expressions both in the numerator and denominator.  2) State restrictions.  3) Cancel out the same terms  4) State restrictions one more time. |

Ex1.

Restriction: x ≠ 0

Ex2.

= Restriction: x ≠ -3 or 5

=

Ex3.