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# Chapter 1

## Classes

### 1.1 poly.ratfunc – rational function

- **Classes**
  - **RationalFunction**

A rational function is a ratio of two polynomials.

Please don't expect this module is useful. It just provides an acceptable container for polynomial division.

### 1.1.1 RationalFunction – rational function class

#### Initialize (Constructor)

**RationalFunction**(numerator: *polynomial*, denominator: *polynomial*=1)  
→ *RationalFunction*

Make a rational function with the given **numerator** and **denominator**. If the **numerator** is a **RationalFunction** instance and **denominator** is not given, then make a copy. If the **numerator** is a kind of polynomial, then make a rational function whose numerator is the given polynomial. Additionally, if **denominator** is also given, the denominator is set to its values, otherwise the denominator is 1.

#### Attribute

**numerator** :  
polynomial.

**denominator** :  
polynomial.

#### Operations

operator	explanation
<b>A==B</b>	Return whether A and B are equal or not.
<b>str(A)</b>	Return readable string.
<b>repr(A)</b>	Return string representing A's structure.

## Methods

### 1.1.1.1 `getRing` – get rational function field

`getRing(self)` → **RationalFunctionField**

Return the rational function field to which the rational function belongs.