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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)

 $\begin{aligned} \textbf{RationalFunction} & (\texttt{numerator:} \ \textit{polynomial}, \ \texttt{denominator:} \ \textit{polynomial} \text{=} 1) \\ & \rightarrow \textit{RationalFunction} \end{aligned}$ 

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 value, otherwise the denominator is 1

#### Attribute

numerator:

polynomial.

denominator:

polynomial.

#### Operations

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

#### Methods

#### ${\bf 1.1.1.1} \quad {\bf getRing-get\ rational\ function\ field}$

 $\mathbf{getRing}(\mathtt{self}) \to \mathbf{RationalFunctionField}$ 

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

# Bibliography