

Ruby 1.8 - Bug #2754

Inconsistent behavior of Math methods on 1.8 when requiring Complex library

02/18/2010 03:33 AM - brixen (Brian Shirai)

Status:	Open	
Priority:	Normal	
Assignee:		
Target version:		
ruby -v:	ruby 1.8.7 (2009-12-24 patchlevel 248) [i686-darwin9.8.0]	
Description		
<pre>=begin On 1.8, requiring lib/complex.rb changes the behavior of Math methods to be Complex-aware. However, the new methods do not behave consistently with the methods they are replacing on various aspects not involving Complex numbers. Here is an example with Math.atanh: # The original method coerces an argument \$ ruby1.8.7 -v -e 'o = Object.new; def o.to_f; 0.5; end; p Math.atanh(o)' ruby 1.8.7 (2009-12-24 patchlevel 248) [i686-darwin9.8.0] 0.549306144334055 # The new method does not \$ ruby1.8.7 -v -rcomplex -e 'o = Object.new; def o.to_f; 0.5; end; p Math.atanh(o)' ruby 1.8.7 (2009-12-24 patchlevel 248) [i686-darwin9.8.0] /Users/brian/devel/ruby187/install/lib/ruby/1.8/complex.rb:614:in '+': Object can't be coerced into Float (TypeError) from /Users/brian/devel/ruby187/install/lib/ruby/1.8/complex.rb:614:inatanh' from -e:1 # The original method raises an ArgumentError \$ ruby1.8.7 -v -e 'p Math.atanh("str")'ruby 1.8.7 (2009-12-24 patchlevel 248) [i686-darwin9.8.0] -e:1:in `atanh': invalid value for Float(): "str" (ArgumentError) from -e:1 # The new method raises a TypeError \$ ruby1.8.7 -v -rcomplex -e 'p Math.atanh("str")' ruby 1.8.7 (2009-12-24 patchlevel 248) [i686-darwin9.8.0] /Users/brian/devel/ruby187/install/lib/ruby/1.8/complex.rb:614:in '+': String can't be coerced into Float (TypeError) from /Users/brian/devel/ruby187/install/lib/ruby/1.8/complex.rb:614:inatanh' from -e:1 These methods should behave consistently on all inputs that are not Complex. There are numerous tickets related to Complex and Math interaction. I was unable to find one that states a satisfactory explanation to this issue. If there is one, please direct me to it and I apologize for the noise. Thanks, Brian =end</pre>		
Related issues:		
Related to Ruby trunk - Bug #2756: Issues with Math and Complex behavior on 1.9		Rejected