

## Ruby master - Feature #15435

Float  Infinity

12/19/2018 08:08 AM - shuujii (Shuji KOBAYASHI)

<b>Status:</b>	Open
<b>Priority:</b>	Normal
<b>Assignee:</b>	
<b>Target version:</b>	

### Description

Float  Infinity  Flonum   
C  DBL2NUM

Ruby  Infinity   
20

```
$ grep 'DBL2NUM.*HUGE_VAL' $(git ls-files | awk '/\.c$/ && !/^(spec|ext\/-test-)\//') | wc -l
21
$ egrep -- '-Float::INFINITY' $(git ls-files | egrep '^(lib|ext)/.*\.rb$') | wc -l
2
```

Infinity

benchmark-driver   
Infinity   
(10% )

Calculating -----

	compare-ruby	built-ruby		
positive_infinity	34.531M	62.540M i/s	-	3.000M times in 0.195822s 0.107997s
negative_infinity	42.581M	94.234M i/s	-	3.000M times in 0.159061s 0.071766s
flonum	142.010M	150.967M i/s	-	3.000M times in 0.047544s 0.045120s
heap	33.952M	34.629M i/s	-	3.000M times in 0.199321s 0.195063s

Comparison:

positive\_infinity  
built-ruby: 62540441.7 i/s  
compare-ruby: 34530877.6 i/s - 1.81x slower

negative\_infinity  
built-ruby: 94234135.1 i/s  
compare-ruby: 42580998.6 i/s - 2.21x slower

flonum  
built-ruby: 150967185.7 i/s  
compare-ruby: 142010146.8 i/s - 1.06x slower

heap  
built-ruby: 34629459.1 i/s  
compare-ruby: 33952081.8 i/s - 1.02x slower

### History

#1 - 12/19/2018 08:13 AM - shuujii (Shuji KOBAYASHI)

- Subject changed from Float  Infinity ni to Float  Infinity ...

#2 - 12/19/2018 08:54 AM - shuujii (Shuji KOBAYASHI)

- Backport deleted (2.4: UNKNOWN, 2.5: UNKNOWN)

- ruby -v deleted (ruby 2.6.0rc2 (2018-12-15 trunk 66408) [x86\_64-linux])

- Subject changed from Float  Infinity ... to Float  Infinity

- Tracker changed from Bug to Feature
- File benchmark.yml added
- File use-predefined-infinity.patch added

**#3 - 12/19/2018 09:01 AM - shuujii (Shuji KOBAYASHI)**

- Description updated

**#4 - 12/20/2018 12:52 AM - ko1 (Koichi Sasada)**

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XXXXXXXXXXXXXXXXXXXXFlonum XXXXXXXXXXXXXXX heap XXXXXXXXXXXXXXX isinf() XXXXXXXXXXXXXXXinf XXXXXXXXXXXXXXX allocate XX inf XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

```

if (isinf(d)) {
  return d < 0 ? rb_float_negative_infinity : rb_float_positive_infinity;
}

```

XXXXXXXXXXXXisinf(d) XXX  
 XXXXXXXXXXXXXXX heap allocate XXXXXXXisinf(d) check XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

XXXXXXXXXXXXXXXX 2% XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX...heap XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXheap  
 XXX

XXXXXXXXXXXXXXXXXXXX

```

rb_global_variable(&rb_float_negative_infinity);

rb_float_negative_infinity = rb_float_new_in_heap(-HUGE_VAL);

```

- (1) rb\_global\_variable XXXXXrb\_gc\_register\_mark\_object XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
- (2) Infinity XXXXXXXXXXXXXXX NegativeInfinity XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

benchmark-driver XXX

**#5 - 12/20/2018 02:27 PM - shuujii (Shuji KOBAYASHI)**

- File use-predefined-infinity-2.patch added

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# XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

```

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rb_global_variable(&rb_float_negative_infinity);
rb_float_negative_infinity = rb_float_new_in_heap(-HUGE_VAL);

```

- (1) rb\_global\_variable XXXXXrb\_gc\_register\_mark\_object XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

XX (XXX  
 doc/extention.rdoc XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX#9894  
 XXXXXXXXXXXXXXXXXXXXXXX)

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- (2) Infinity XXXXXXXXXXXXXXX NegativeInfinity XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

Float::NEGATIVE\_INFINITY XXXXXXXXXXXXXXXXXXXXXXX? XXXXXXX  
 XXXXXXXJava X JavaScript XX POSITIVE\_INFINITY X NEGATIVE\_INFINITY X  
 XXXXXXXXXXXXXXXXXXXXXXX

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XXXXXXXXXXXXXXXXXXXXFlonum XXXXXXXXXXXXXXX heap XXXXXXXXXXXXXXX isinf() XXXXXXXXXXXXXXXinf XXXXXXXXXXXXXXX allocate XX inf XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

