

## Ruby master - Bug #6862

### BigMath.exp negative exponent

08/13/2012 05:58 PM - karatedog (Földes László)

|  |   |
|--|---|
| <b>Status:</b> Closed  |   |
| <b>Priority:</b> Normal  |   |
| <b>Assignee:</b> mrkn (Kenta Murata)   |   |
| <b>Target version:</b> 2.6   |   |
| <b>ruby -v:</b> ruby 1.9.3p260 (2012-08-09 revision 36669) [i686-linux]  | <b>Backport:</b> 1.9.3: DONE, 2.0.0: DONE |
| <b>Description</b><br>Ruby 1.9.3 BigMath.exp accepts Fixnum for exponent but silently treats negative exponents as positive:<br>1.9.3p260 :009 > BigMath.exp(3, 10)<br>=> #<br>1.9.3p260 :010 > BigMath.exp(-3, 10)<br>=> #<br><br>Converting the exponent parameter to BigDecimal solves the problem:<br>1.9.3p260 :011 > BigMath.exp(BigDecimal(-3), 10)<br>=> # |   |
| <b>Related issues:</b>   |   |
| Related to Backport200 - Backport #8587: Back porting r41623   | <b>Closed</b> <b>06/25/2013</b>           |
| Related to Backport193 - Backport #8603: Back porting r41623   | <b>Closed</b> <b>06/25/2013</b>           |

#### Associated revisions

##### Revision f6a8c82e - 07/01/2013 06:37 AM - mrkn (Kenta Murata)

Additionally mention Heesob Park for his patch to [Bug #6862]

git-svn-id: svn+ssh://ci.ruby-lang.org/ruby/trunk@41723 b2dd03c8-39d4-4d8f-98ff-823fe69b080e

##### Revision 41723 - 07/01/2013 06:37 AM - mrkn (Kenta Murata)

Additionally mention Heesob Park for his patch to [Bug #6862]

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##### Revision 157dd917 - 07/01/2013 06:09 PM - nagachika (Tomoyuki Chikanaga)

merge revision(s) 41623,41723: [Backport #6862] [Backport #8587]

```
* ext/bigdecimal/bigdecimal.c (BigMath_s_exp): Fix for the cases when
the argument x is not a BigDecimal.
This change is based on the patch made by Garth Snyder.
[Fix GH-332] https://github.com/ruby/ruby/pull/332
This change is based on the patch made by Heesob Park and Garth Snyder.
[Bug #6862] [ruby-core:47145]
```

git-svn-id: svn+ssh://ci.ruby-lang.org/ruby/branches/ruby\_2\_0\_0@41733 b2dd03c8-39d4-4d8f-98ff-823fe69b080e

## Revision 24eff272 - 07/11/2013 01:09 AM - usa (Usaku NAKAMURA)

merge revision(s) 41623,41723: [Backport #8603]

```
* ext/bigdecimal/bigdecimal.c (BigMath_s_exp): Fix for the cases when
the argument x is not a BigDecimal.
This change is based on the patch made by Garth Snyder.
[Fix GH-332] https://github.com/ruby/ruby/pull/332
This change is based on the patch made by Heesob Park and Garth Snyder.
[Bug #6862] [ruby-core:47145]
```

git-svn-id: svn+ssh://ci.ruby-lang.org/ruby/branches/ruby\_1\_9\_3@41909 b2dd03c8-39d4-4d8f-98ff-823fe69b080e

## History

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### #1 - 08/13/2012 11:38 PM - phasis68 (Heesob Park)

BigMath.exp cannot handle floating point value too.

```
C:\Users\phasis>ruby -rbigdecimal -e 'p BigMath.exp(3.0,10)'
-e:1:in exp': Float can't be coerced into BigDecimal without a precision (ArgumentError)
from -e:1:in'
```

And Here is a patch.

```
diff --git a/bigdecimal.c b/bigdecimal.c.new
index 866ce34..f0dc9bd 100644
--- a/bigdecimal.c
+++ b/bigdecimal.c.new
@@ -2546,6 +2546,7 @@ BigMath_s_exp(VALUE klass, VALUE x, VALUE vprec)
if (negative) {
VpSetSign(vx, 1);
}
```

- x = ToValue(vx);

```
RB_GC_GUARD(one) = ToValue(VpCreateRbObject(1, "1"));
RB_GC_GUARD(x1) = one;
```

### #2 - 08/20/2012 04:54 PM - naruse (Yui NARUSE)

- Status changed from Open to Assigned
- Assignee set to mrkn (Kenta Murata)

### #3 - 02/26/2013 10:19 AM - naruse (Yui NARUSE)

- Target version changed from 1.9.3 to 2.6

### #4 - 06/25/2013 10:13 PM - phasis68 (Heesob Park)

This issue was solved with changeset r41623.  
BTW, my patch is same to Garth Snyder's and it is 11 months old.

### #5 - 06/26/2013 02:24 AM - nagachika (Tomoyuki Chikanaga)

- Backport set to 1.9.3: REQUIRED, 2.0.0: REQUIRED

### #6 - 07/01/2013 03:37 PM - mrkn (Kenta Murata)

- Status changed from Assigned to Closed
- % Done changed from 0 to 100

This issue was solved with changeset r41723.  
Földes, thank you for reporting this issue.  
Your contribution to Ruby is greatly appreciated.  
May Ruby be with you.

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Additionally mention Heesob Park for his patch to [Bug #6862]

**#7 - 07/01/2013 03:38 PM - mrkn (Kenta Murata)**

phasis68 (Heesob Park) wrote:

This issue was solved with changeset r41623.  
BTW, my patch is same to Garth Snyder's and it is 11 months old.

I'm sorry I missed this issue and your patch.  
I added your name in ChangeLog at r41723.

**#8 - 07/01/2013 04:10 PM - mame (Yusuke Endoh)**

So phasis68 should have a commit bit, as I said. ;-)

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Yusuke Endoh [mame@tsg.ne.jp](mailto:mame@tsg.ne.jp)

**#9 - 07/02/2013 03:10 AM - nagachika (Tomoyuki Chikanaga)**

- Backport changed from 1.9.3: *REQUIRED*, 2.0.0: *REQUIRED* to 1.9.3: *REQUIRED*, 2.0.0: *DONE*

**#10 - 07/03/2013 11:44 PM - mrkn (Kenta Murata)**

mame (Yusuke Endoh) wrote:

So phasis68 should have a commit bit, as I said. ;-)

+1

**#11 - 08/02/2013 08:53 PM - usa (Usaku NAKAMURA)**

- Backport changed from 1.9.3: *REQUIRED*, 2.0.0: *DONE* to 1.9.3: *DONE*, 2.0.0: *DONE*