

This document outlines the remaining work needed to finalize double precision support in `stdlib/math/base/special`. Thanks to Gunj, only a few double precision C implementations remain to be completed. Since these implementations are independent of the single precision work, both can progress in parallel without any dependencies.

1. Missing addons

These packages lack proper C implementations and need their native addon implementations to be updated. There are already open PRs addressing this. I will try to review those and assess their status. If not, they can be implemented from the beginning.

- `cabs2f`
- `cabsf`
- `cceilf`
- `cflipsignf`
- `cidentityf`

2. Missing C implementations

These functions need to be implemented from scratch.

Package Name	Missing Prerequisite(s)
<code>bessely1</code>	
<code>ellipj</code>	
<code>heaviside</code>	
<code>heavisidef</code>	
<code>minmax</code>	
<code>gammainc</code>	
<code>gammaincinv</code>	

kernel-betainc	
betainc	kernel-betainc
kernel-betaincinv	betainc
betaincinv	kernel-betaincinv

3. Missing C implementations ...?

Following what was mentioned in [#3377](#)

These variadic functions can either be left without a C implementation or implemented using a valid workaround with `argc` and `argv`.

- maxabsn
- maxn
- minabsn
- minmaxn
- minmaxabsn
- minn