

# Re: Weibull Distribution but with a varied cycle time

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- *From:* "Old Mac User" <[chendrixstats@xxxxxxxxx](mailto:chendrixstats@xxxxxxxxx)>
  - *Date:* 28 Jan 2007 10:40:20 -0800
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Just from experience, a minimum of 12 – 16 data for creating a Weibull plot. This truly is a minimum, but it's a good place to begin.

One point I wandered around but did not dig into. The slope of the line on a Weibull plot can be used to tell us whether the failure rate is increasing or decreasing as the device/system ages. This is important. If the failure rate is decreasing with age then there's a sense of "burning in" by removing the weak ones. If the failure rate is increasing with age then there's a sense of "wearing out". For many electronic devices (but not necessarily total systems) the failure rate is constant or almost constant after burning in (or burning out, if you prefer) the weakest ones. Weibull paper provides an easy way of finding the slope of the line along with printed guidelines to help in determining whether the failure rate is decreasing or increasing. This is one reason I suggested going directly to valid Weibull graph paper.

Re: Software for plotting. By this I assume you mean not just creating blank Weibull graph paper, but plotting the points on the Weibull plot. There's probably commercial software that does this. If this sort of activity is to be done just now-and-then, it's hardly worth buying software and learning to use it.

If it's something you propose to do daily, then software may be useful.

I use Kaleidagraph for making plots of data, especially probability plots. Weibull plots are one of many kinds of probability plots. My Kaleidagraph software (on an old Macintosh) is fairly old. It doesn't do Weibull plots. Perhaps the most recent version of Kaleidagraph will do that...?? There may be other choices.

There are many kinds of probability plots (different scales, different axes) other than binomial, normal, log normal, Weibull, etc. It's unlikely that anyone has created software that makes plots for all of these.

Good luck... OMU

Re: Weibull Distribution but with a varied cycle time

On Jan 27, 6:32 pm, "googlinggoog...@xxxxxxxxxxxxx"  
<googlinggoog...@xxxxxxxxxxxxx> wrote:

Thank you for your kind offer, I will be in touch if i need further reference material. I believe I have all of this in my undergrad notes or at least the basics and so I will have a dig for that first before bothering you!

One last question really concerns how many times is a good amount of times to test to get suitable data? Obviously the more data I collect the more representative the results will be. But realistically there needs to be a cap on the amount of time I run my tests for.

I'm quite looking forward to this now. Another thing can you recommend a way to produce weibull plots on computer? as you mention excel is not the way to go. I will do all my analyse by hand as you mention to start with how ever.

Thanks

David