
Normal Percentiles

Gene Quinn

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In general, we need to know:

- the mean μ
- the standard deviation σ
- the percentile q , expressed as a proportion (i.e., 0.50)

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Then the percentile is given by:

=NORMINV(q, μ, σ)

Example

What is the 41st percentile of a normal population with mean 70 and standard deviation 5?

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In this case:

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- the standard deviation is 5
- the percentile is 0.41

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- the standard deviation is 5
- the percentile is 0.41

The 41st percentile is:

$$=NORMINV(0.41,70,5)=68.8$$

Example

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- the standard deviation is 15
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- the standard deviation is 15
- the percentile is 0.90

The 90th percentile is:

$$= \text{NORMINV}(0.90, 100, 15) = 119.2$$