ATAR Calculations

Can we predict what UAC does?

Associate Professor Jacqui Ramagge
School of Mathematics and Applied Statistics

Overview of Presentation

1. Who am I?
2. What is the difference between an ATAR and a UAI?
3. What is an ATAR?
4. How is the ATAR calculated?
5. What can we predict?
6. How are ATAR cut-offs set?

Part 1: Who am I?

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- Two colleagues have been on UAC's Technical Committee on Scaling.

Part 2: What is the difference between an ATAR and a UAI?

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- The change means that all States and Territories except Queensland now report high school performance rankings on a common scale.

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- Individual percentile rankings change with the full inclusion of the year 7 cohort.

Part 3: What is an ATAR?

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Contrast this to the HSC, which tells us a lot about what students know but nothing about their rank in their year.

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- An ATAR of 60 means a student is in the 60th percentile, ie in the top 40%.

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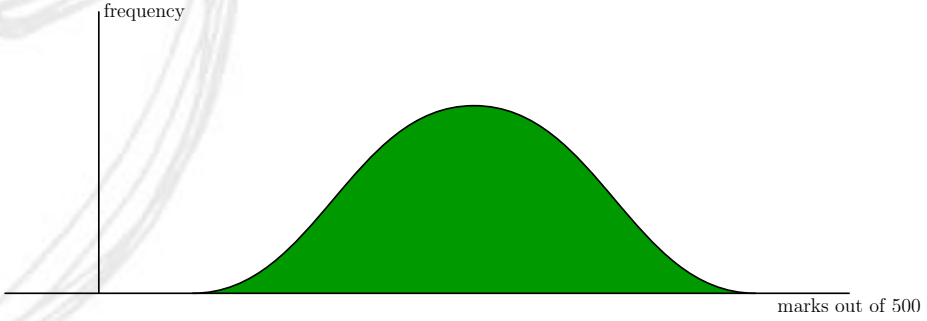
- The results are added to produce a mark out of 500.
- All students are ranked according to their score out of 500.
- A student's ATAR is their percentile position out of all students who started year 7 with them.

Spreading out the ATAR

The distribution of scores out of 500 is effectively normal.



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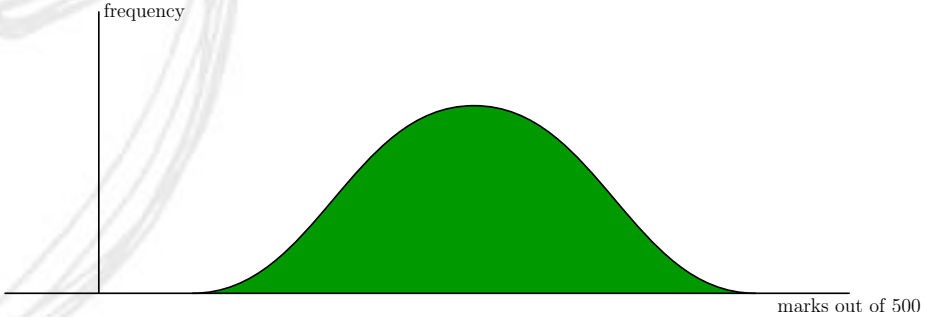

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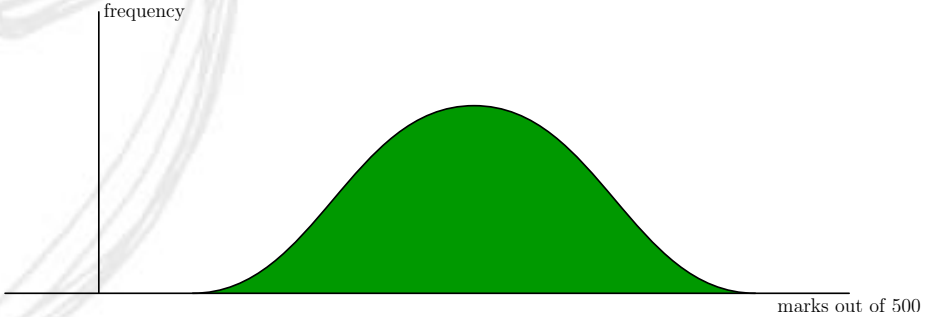

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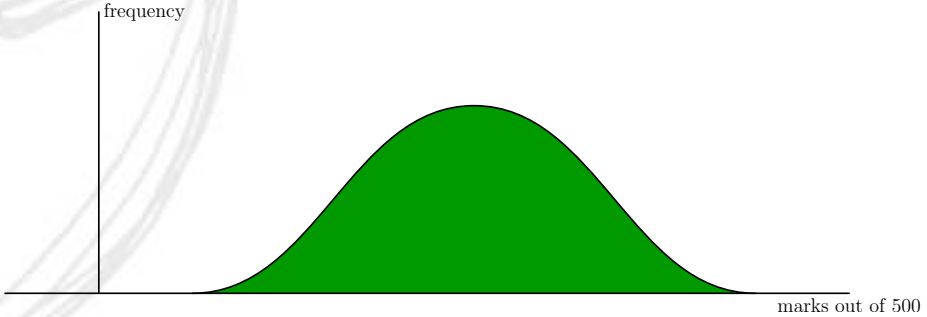

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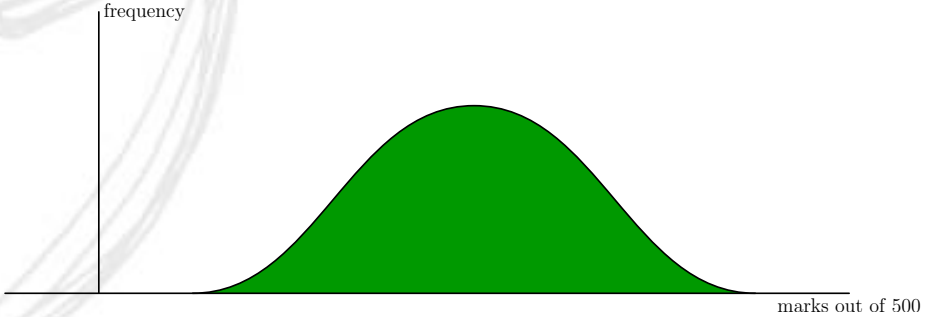

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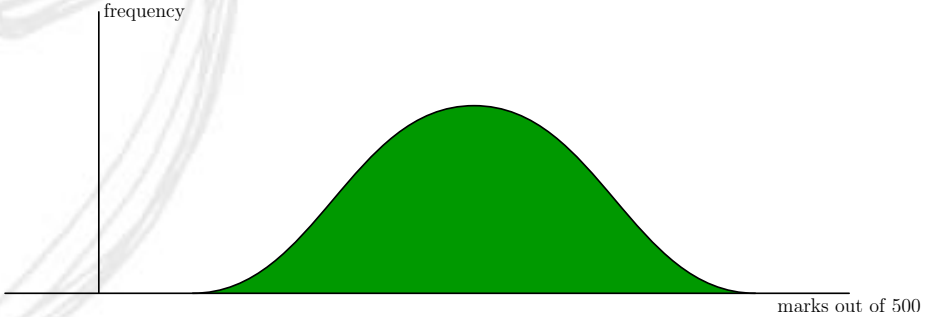

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If you get 5 bonus points you're jumping over 1000 people.

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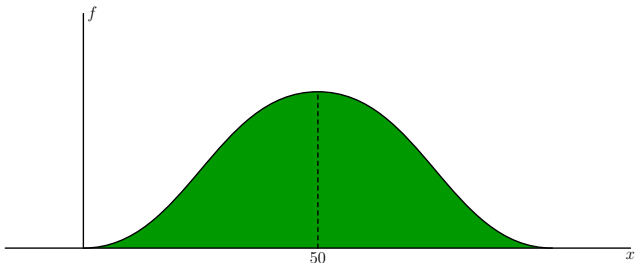

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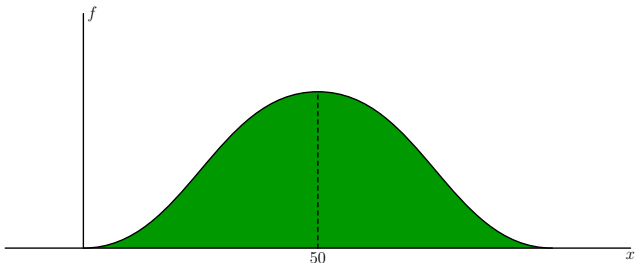

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- Note that this changes the marks but not the ranking within a course.

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To understand the implications of this, note the effects of scaling.

Calculating the ATAR: Step 2 pictures

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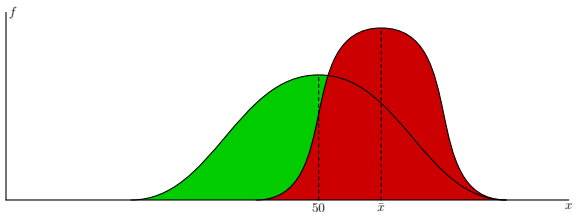

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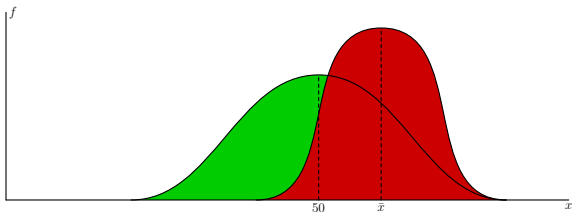

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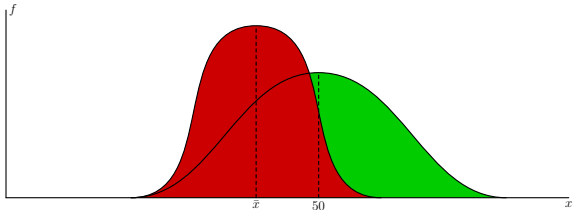

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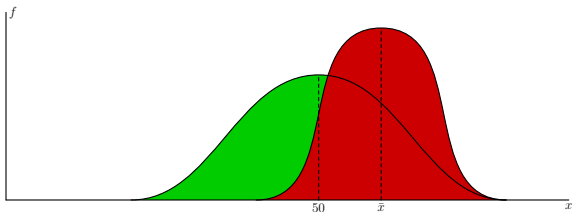

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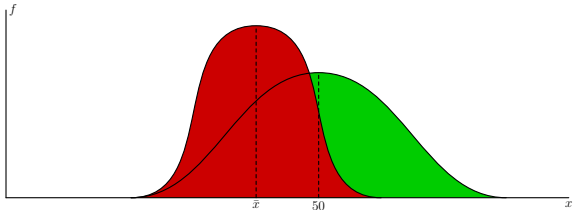

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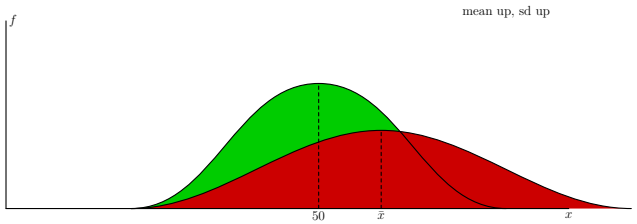

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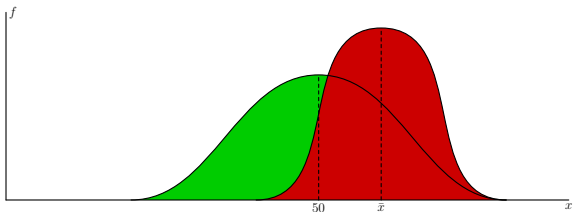

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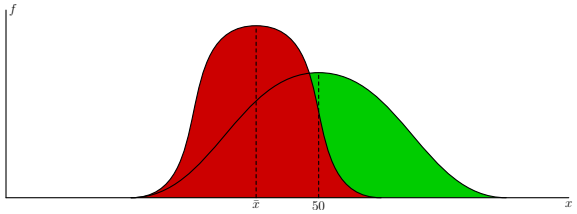

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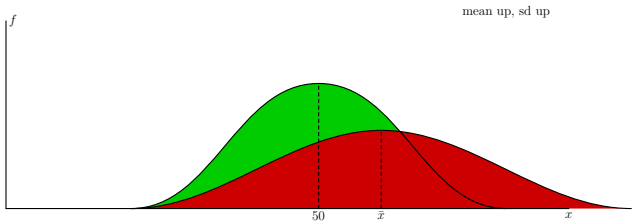

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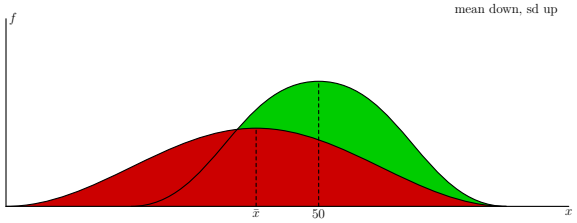

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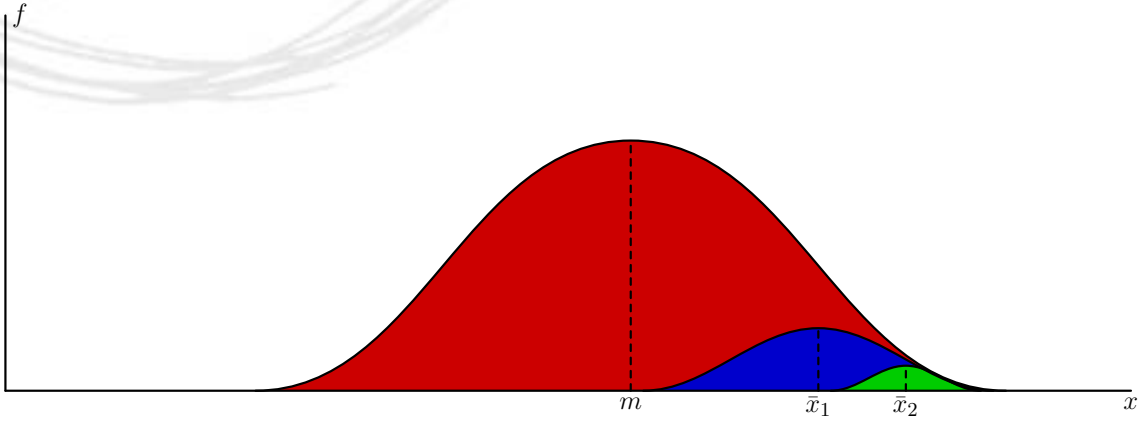

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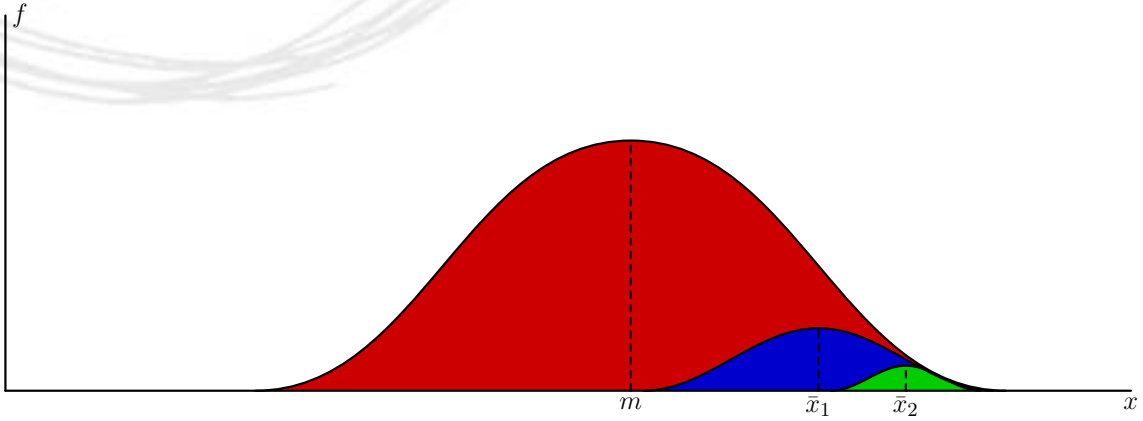

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Finally, results in all courses are tweaked to cap top marks.

Part 5: What can we predict?

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- Students should do subjects they enjoy, because they are likely to perform better in them.

Part 6: How are ATAR cut-offs set?

2. What is the difference between an ATAR and a UAI?

3. What is an ATAR?

4. How is the ATAR calculated?

5. What can we predict?

6. How are ATAR cut-offs set?

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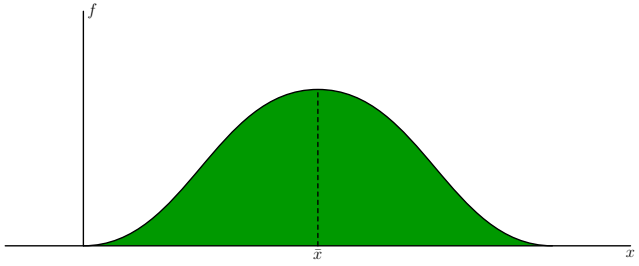
- ATAR cut-offs reflect supply and demand more than the intellectual capacity needed to undertake the studies.

Any Questions?

Thank you for your attention.

Features of a normal distribution

The mean, or average, of a normal distribution is a measure of centre; its value is usually denoted by $\bar{x}$.



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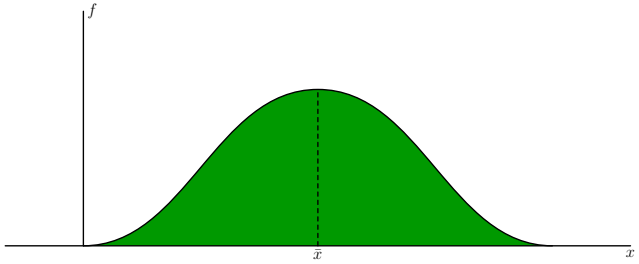
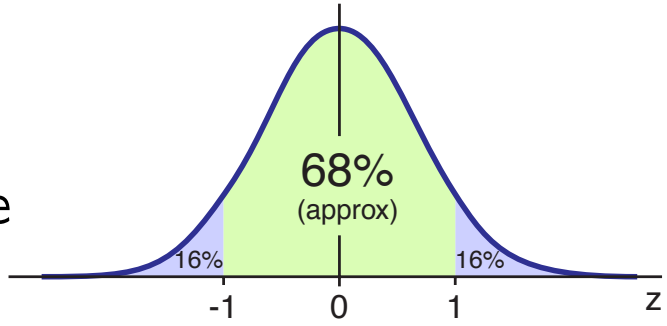


The standard deviation, σ, of a normal distribution is a measure of spread; $\approx 68\%$ of data is within one standard deviation of the mean.



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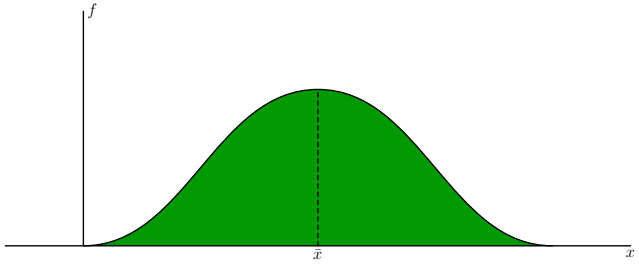

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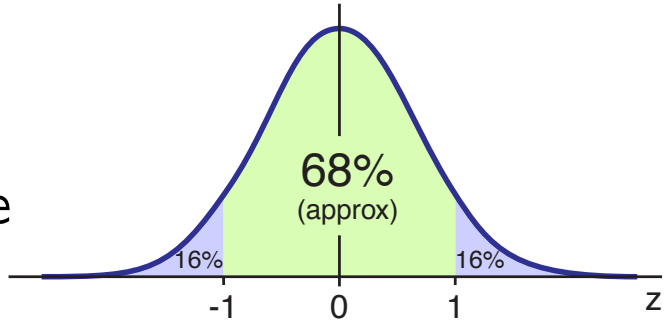

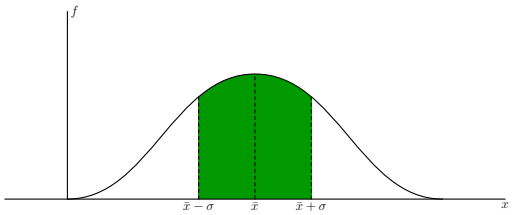

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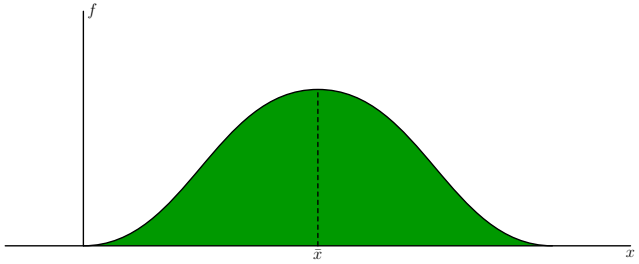

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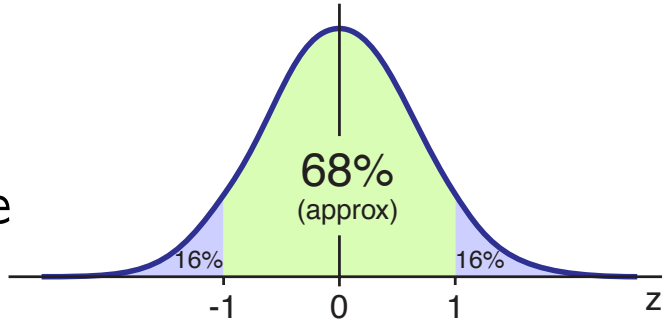

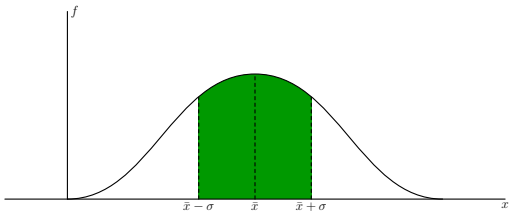

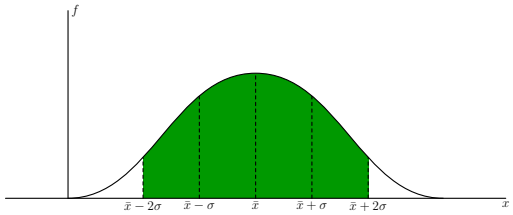

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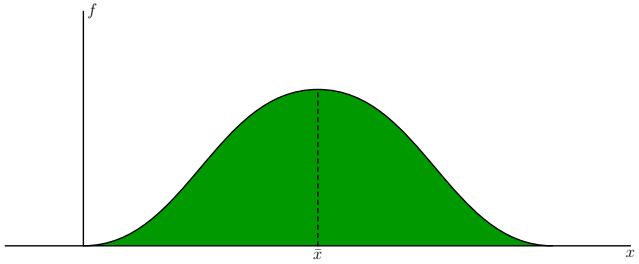

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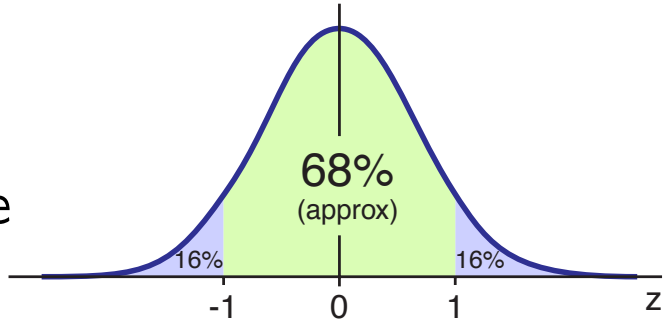

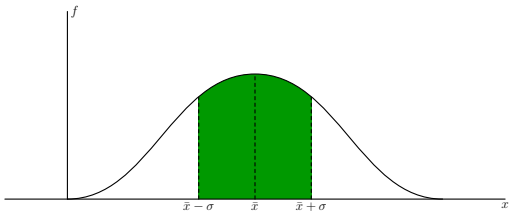

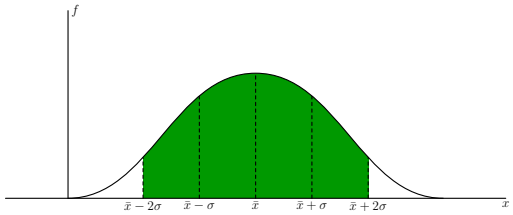

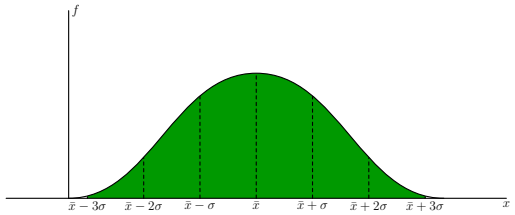

Scaling subjects

What does this scaling do?

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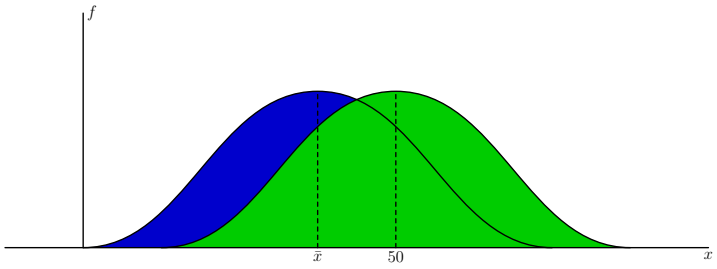
The mean can move up to 50



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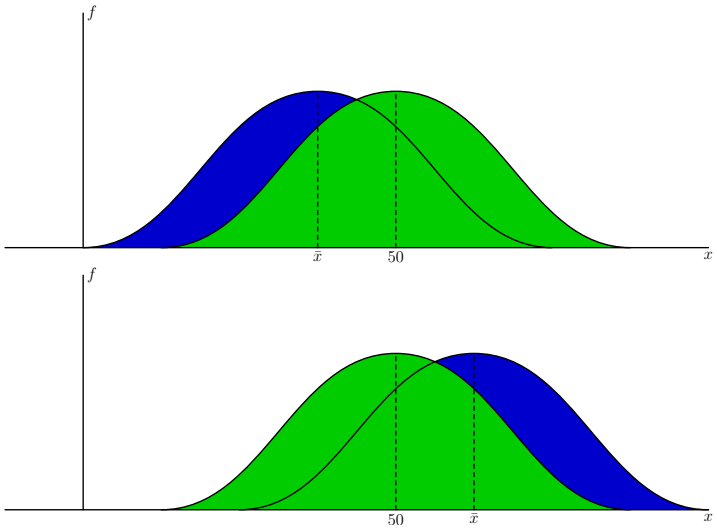

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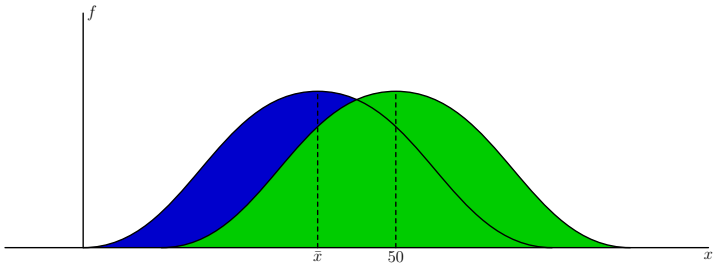

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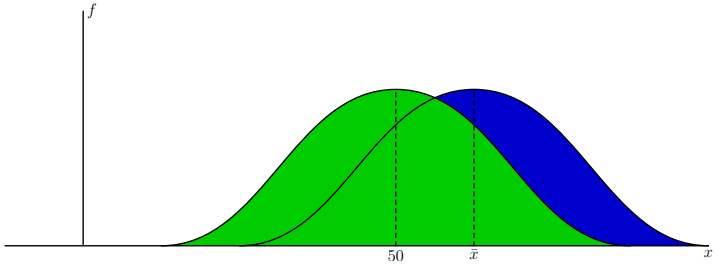
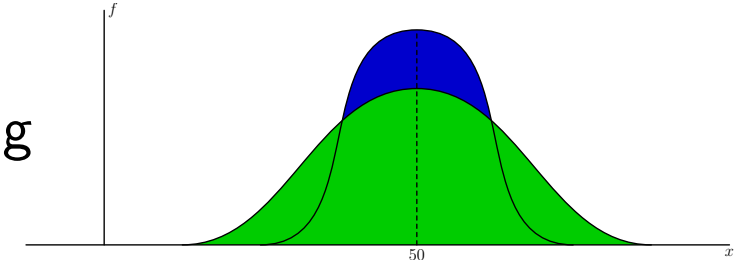


The standard deviation can increase, flattening and stretching the distribution out,



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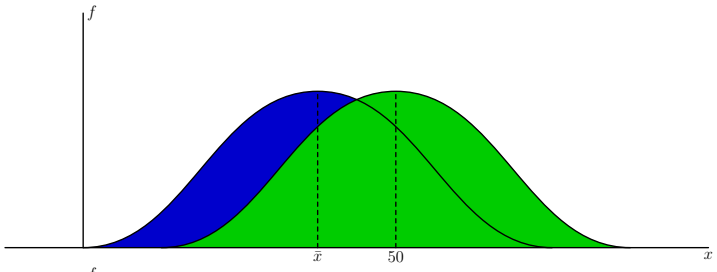

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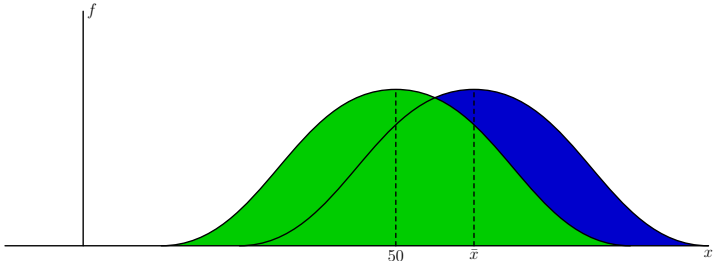

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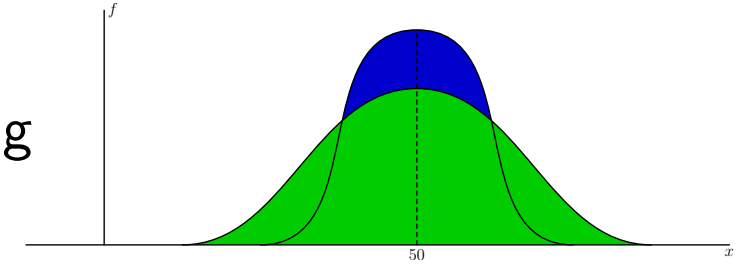
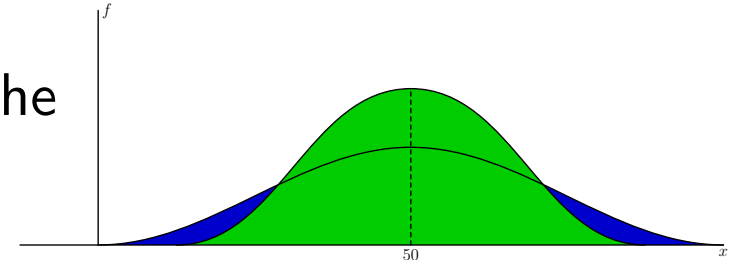
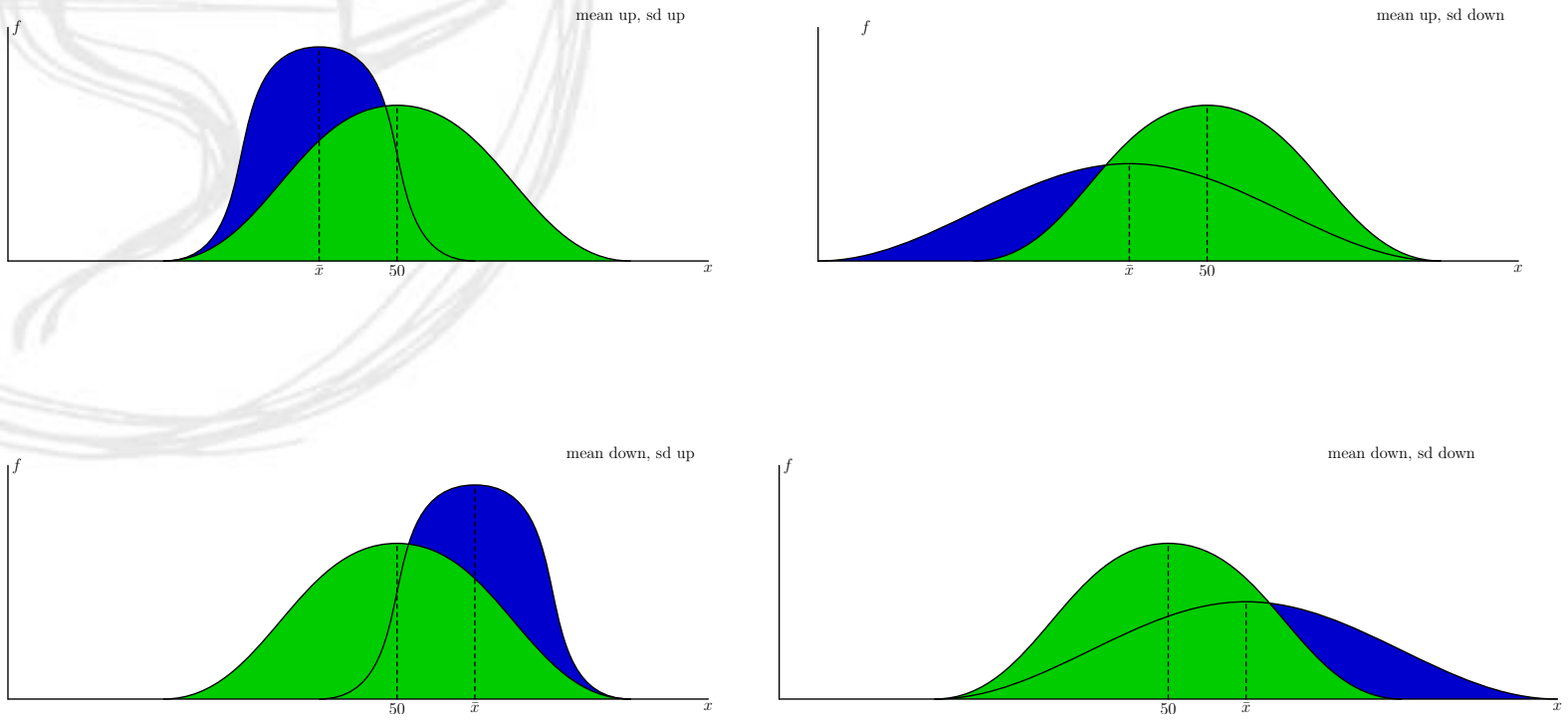


or it can decrease, compressing the distribution.



The combined effects fall into four classes...



◂ Scaling subjects