

[Back to Master grades](#) [Back to Bachelor grades](#)

Instead of comparing each grade, you can combine them together. To do this, I average $(x - \text{mean}) / \text{std}$. The result of this formula should be gaussian distributed around 0. The standart deviation is a big more complicated. Since each initial distribution has a width of 1, the average distribution has a width of $1/\sqrt{N}$ with the number of exams N (Assuming independent gaussian variables, the sum of N variables has a standart deviation of \sqrt{N} , and since I divide by N to get the average, this results in $1/\sqrt{N}$). To make this more easily comparable, I multiply the average by \sqrt{N} , to get a comparison value that is normal distributed with a standart deviation of 1.

For my master studies, this results in a score of 1.4, while for bachelor studies it is 0.4 and for both together 1.16.

If you ignore, that assuming uncorrelated exams, aswell as perfectly gaussian grade distributions, might have chanced the statistics a bit, you can use this as a z value, and deduce that on average you expect 8% of students to have better grades than me (in my masters, for my bachelors this increases to 34% and in total to ~12%)