Hi Romola

Thanks for sending me the file with the 1101 marks.

The issue I wanted to look at stems from the multiple-choice exam which counted for 52% of the mark – although the scores from the exam are scaled, they aren’t graded in the sense that the marks don’t map onto the university’s grading scale (50-59 for a pass, 60-69 for a credit, and so on). We assume that the marks from the MC exam do have a one-to-one mapping with the grading scale, but of course they don’t.

I scaled the MC exam to have the same mean and SD as the lab report, which *was* marked according to the grading scale. I got a z score for each student’s MC mark, and then used this to scale the MC marks using the mean and SD of the lab report marks; thus someone with a z of 0 got a scaled MC score of 64.9, the mean mark given to the 880 lab reports (I eliminated all cases with zero marks).

Using this scaled MC mark to calculate the final mark gives a mean of 70.4 with an SD of 14.4; the original final mark, without scaling the MC, had a mean of 73.1 with an SD of 9.7. The effect was to reduce the mean (by 2.7 marks) and to increase the spread of scores. The final marks with the scaled MC score would have given 22% HDs and 34% Ds; thus 56% of students would have got a D or above, compared to 68% (from memory) of the unscaled marks.

Geoff