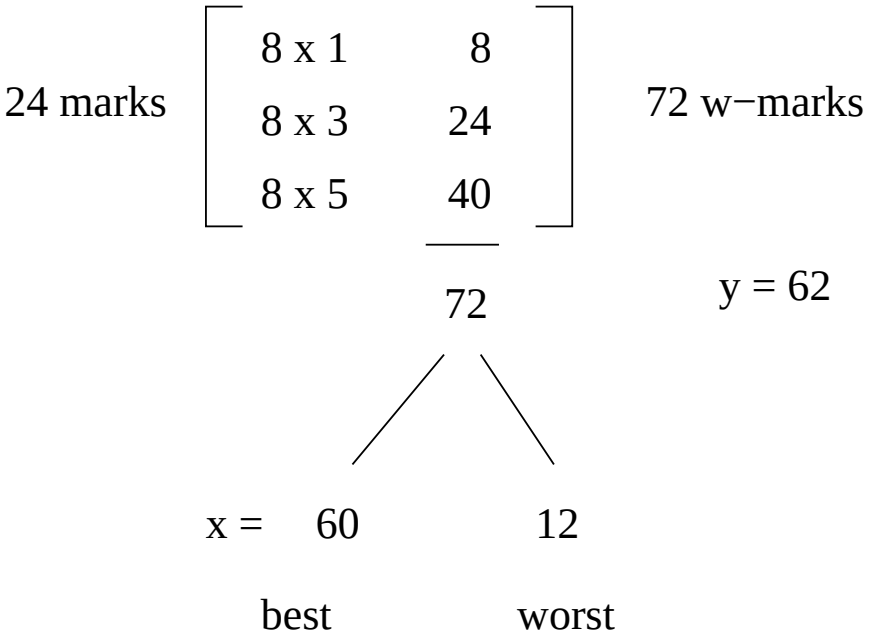
Mysteries of the I-score

Caveat emptor: No guarantees, no promises!!

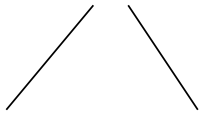
BSc w-mark breakdown



BSc(EMY) w-mark breakdown

8 x 1	8
8 x 3	24
2 x 5	10
8 x 5	40
	82

y = 70



x = 68 (best) 14 (worst)

MSci w-mark breakdown

8 x 1	8
8 x 3	24
8 x 5	40
8 x 5	40
	112

y = 96

x = 93 19

best worst

The I-score

$$I = \frac{s + \frac{r}{4}}{y}$$

- s is the sum of the best x w-marks
- r is the sum of the remainder of the w-marks
- y is a weighting factor
- vary x and y to get I-scores for different types of degrees

Different degree weightings

- 3-year BSc: $x = 60$, $r =$ sum of remaining 12 w-marks and $y = 62$
- 4-year BSc (extra-mural year): $x = 68$, $r =$ sum of remaining 14 w-marks and $y = 70$
- 4-year MSci: $x = 93$, $r =$ sum of remaining 19 w-marks and $y = 96$

Why you can't complain about your degree classification

Suppose your average mark across your whole degree is $A\%$. To factor out year weightings, let's suppose that you got this average mark by getting $A\%$ for every module. For BSc students

$$I = \frac{60 \times A + \frac{12 \times A}{4}}{62} = \frac{63 \times A}{62} = 1.016129 \times A$$

The I-score is designed to give you a little "lift" at the end of your degree.

Example I-score calculation for BSc

- list marks for each year and weight them
- cut off worst 12 w-marks and calculate r
- calculate s with the remaining 60 (best) w-marks
- apply formula for I-score

list marks for each year and weight them

first year		second year		third year	
53	(1)	56	(3)	**27**	**(5)**
66	(1)	42	(3)	**34**	**(5)**
58	(1)	40	(3)	**25**	**(5)**
63	(1)	43	(3)	44	(5)
49	(1)	74	(3)	65	(5)
50	(1)	78	(3)	65	(5)
61	(1)	49	(3)	39	(5)
47	(1)	44	(3)	45	(5)

cut off worst 12 w-marks and calculate r

first year		second year		third year	
53	(1)	56	(3)		
66	(1)	42	(3)	34	(3)
58	(1)	40	(3)		
63	(1)	43	(3)	44	(5)
49	(1)	74	(3)	65	(5)
50	(1)	78	(3)	65	(5)
61	(1)	49	(3)	39	(5)
47	(1)	44	(3)	45	(5)

$$r = 25 \times 5 + 27 \times 5 + 34 \times 2 = 125 + 135 + 68 = 328$$

calculate s with the remaining 60 w-marks

$$
\begin{aligned}
s &= 53 + 66 + 58 + 63 + 49 + 50 + 61 + 47 + \\
&(56 + 42 + 40 + 43 + 74 + 78 + 49 + 44 + 34) \times 3 + \\
&(44 + 65 + 65 + 39 + 45) \times 5 \\
&= 447 + 1380 + 1290 \\
&= 3117
\end{aligned}
$$

apply formula for I-score

$$I = \frac{s + \frac{r}{4}}{y} = \frac{3117 + \frac{328}{4}}{62} = 51.6$$

So this student would get a IIB degree classification

Back in time

- Let's suppose we go back in time to when our student is in the first semester of the final year and approaching the January exams.
- We assume that the 3rd year marks will be better than the current worst 12 w-marks and so will be part of the top 60 w-marks.
- Call the desired average for third year D. Eight third year modules, each weighted by 5, means D will have a weight of 40.
- Call the remainder of the (best) w-marks S.
- So $s = S + 40 \times D$.

Transforming the I-score formula

$$I = \frac{S + 40 \times D + \frac{r}{4}}{y}$$

so

$$D = \frac{y \times I - (S + \frac{r}{4})}{40}$$

This means if we know S and r we can find what the average mark in the remaining exams must be to get a particular I-score.

first year		second year	
53	(1)	56	(3)
66	(1)	**42**	**(3)**
58	(1)	**40**	**(3)**
63	(1)	**43**	**(3)**
49	(1)	74	(3)
50	(1)	78	(3)
61	(1)	49	(3)
47	(1)	**44**	**(3)**

$$r = (40 + 42 + 43 + 44) \times 3 = 507$$

$$S = 53+66+58+63+49+50+61+47+(56+74+78+49)\times 3 = 1218$$

Calculating desired averages

Suppose the student wants to pass (we all want that). Then $I = 40$.

$$D = \frac{62 \times 40 - (1218 + \frac{507}{4})}{40} = 28.38$$

Apart from the requirement to pass the project, getting the degree is a walk in the park.

But what if the student wants a IIB, so that $I = 50$?

$$D = \frac{62 \times 50 - (1218 + \frac{507}{4})}{40} = 43.88$$

The student needs to average at least 43.88%. In fact the third year average was 43% (but the assumption that all the third year marks were better than the worst 12 weights of existing marks was broken).

Calculating desired averages

Wants a IIA? Then $I = 60$.

$$D = \frac{62 \times 60 - (1218 + \frac{507}{4})}{40} = 59.39$$

But what if the student wants a I, so that $I = 70$?

$$D = \frac{62 \times 70 - (1218 + \frac{507}{4})}{40} = 74.89$$

The student needs to average at least 74.89%.

BSc with a year in industry and MSci

Same formula:

$$D = \frac{y \times I - (S + \frac{r}{4})}{40}$$

but need to find the 14 worst w-marks to calculate r and use $y = 70$.

MSci use the same formula but calculate r as the 19 worst w-marks and use $y = 96$.

Back to back in time

- Let's suppose we go back in time to when our student has completed the January exams.
- Again we assume that the May final year marks will be better than the current worst 12 w-marks and so will be part of the top 60 w-marks.
- Call the desired average for third year D. Three final year, final semester exam modules, plus the two project modules, each weighted by 5, means D will have a weight of 25.
- Call the remainder of the (best) w-marks S.
- So $s = S + 25 \times D$.

Transformed BSc I-score for after 1st semester exams

$$I = \frac{S + 25 \times D + \frac{r}{4}}{y}$$

so

$$D = \frac{y \times I - (S + \frac{r}{4})}{25}$$

That's all, folks!!