

EB 2020 moderation formula

Consider the following piecewise function:

$$i(x) = \begin{cases} 90 + \frac{8.2(x - 91.05)}{7.15}, & x \geq 91.05 \\ 85 + \frac{4.99(x - 86.6)}{4.4}, & 86.6 \leq x < 91.05 \\ 80 + \frac{4.99(x - 82.4)}{4.2}, & 82.4 \leq x < 86.6 \\ 75 + \frac{4.99(x - 78)}{4.4}, & 78 \leq x < 82.4 \\ 70 + \frac{4.99(x - 72.8)}{5.2}, & 72.8 \leq x < 78 \\ 60 + \frac{9.99(x - 59.8)}{13}, & 60 \leq x < 72.8 \\ x, & 0 \leq x < 59.8 \end{cases}$$

Let p denote the preliminary mark.

The final mark is determined by the following formula:

$$f(p) = \begin{cases} i(p), & p - i(p) < 1.5 \\ p - 1.5 & \text{otherwise} \end{cases}$$

It can be also express as:

Notation: P = preliminary mark, I = intermediate mark, M = moderated mark

IF $P \geq 91.05$ THEN $I = 90 + 8.2 * (P - 91.05) / 7.15$,

ELSE IF $P \geq 86.6$ THEN $I = 85 + 4.99 * (P - 86.6) / 4.4$,

ELSE IF $P \geq 82.4$ THEN $I = 80 + 4.99 * (P - 82.4) / 4.2$

ELSE IF $P \geq 78$ THEN $I = 75 + 4.99 * (P - 78) / 4.4$

ELSE IF $P \geq 72.8$ THEN $I = 70 + 4.99 * (P - 72.8) / 5.2$

ELSE IF $P \geq 60$ THEN $I = 60 + 9.99 * (P - 59.8) / 13$

ELSE $I = P$

IF $I - P < 1.5$ THEN $M = I$

ELSE $M = P - 1.5$