Background
The rechecking and remarking policy for the Hong Kong Diploma of Secondary Education Examination (HKDSE), which includes the criteria for upgrading, aims to ensure the reliability and fairness of grade awards for all candidates, irrespective of whether they have applied for rechecking and remarking. It is reviewed regularly by the HKEAA and any proposed changes will be considered and approved by the Public Examinations Board (PEB).

Criteria for upgrading after rechecking and remarking
1. Following rechecking, the subject/component results will be upgraded if technical errors are found and the final mark after correction of technical errors attains the cut score of the higher level concerned.

2. After remarking, the subject/component result will be upgraded only if the final mark attained after the remarking process reaches a specified margin above the cut score of the higher level concerned.

Rationale for applying a specified margin for upgrading
Every effort has been made throughout the marking and grading processes to ensure the accuracy of the grades awarded. Details about the rigorous procedures for marking and processing of marks can be found in the leaflet entitled *Marking and Processing of Marks*.

The grade award of individual Category A subjects is determined by a panel of expert judges after the examination each year following standards-referenced grading procedures and recommended to the PEB for deliberation and approval. Details can be found in the booklet *Grading Procedures and Standards-referenced Reporting in the HKDSE*.

Both the leaflet *Marking and Processing of Marks* and booklet *Grading Procedures and Standards-referenced Reporting in the HKDSE* are available on the HKEAA website: [www.hkeaa.edu.hk/en/resources/leaflets/leaflets.html](http://www.hkeaa.edu.hk/en/resources/leaflets/leaflets.html)

After the release of results, some candidates may apply for rechecking and remarking for various reasons. All scripts of candidates requesting remarking are independently remarked after being checked for technical errors. Efforts are made to ensure that the scripts are remarked by persons other than the original markers.
However, it should be noted that there is an element of professional judgement in the marking process, especially for answers to questions of an open-ended nature. It is possible that the same script will be given a different score in a different assessment context, including the remarking being conducted a couple of months after the original marking exercise, scripts not being remarked by exactly the same pool of markers, etc. This change in assessment context will lead to variations in the marks awarded to scripts with a comparable level of attainment. Due to the natural and legitimate variability in the marks given to candidates’ work, if a candidate’s final mark after remarking just reaches the cut score of the higher level, there is insufficient proof that the original grade awarded is an inaccurate reflection of the attainment of the candidate and there is likelihood that he/she might not have actually attained the standard of the higher level. Therefore, strong evidence must be produced in the remarking process to justify any change in the original grades awarded. This is to ensure the overall reliability of the grade awards for all candidates.

Therefore, following remarking, the subject/component results will be upgraded only if the final mark reaches a specified margin above the cut score of the higher level concerned. This tolerance limit for the variation of marks after remarking ensures the fairness of grade awards for all candidates, not only for candidates who have applied for remarking.

Methodology for determining the specified margin for upgrading
In light of the above considerations and based on educational measurement theory, a policy is in place for all HKDSE Category A subjects and at all levels that an upgrade requires that the final subject mark after remarking reaches a certain number of marks (the specified margin) above the cut score of the higher level to which the candidate may be upgraded.

The specified margin for upgrading is set in terms of ‘standard marks’, with one standard mark being defined as 1/20 of the mark range between adjacent levels. The specified margin at each level of an individual subject is set at the same number of standard marks but the actual number of subject marks in the specified margin is dependent on the following factors:

1. **The available mark range of the higher level concerned**
   The mark range of each level of individual subjects is dependent on the cut scores for adjacent levels, which are determined by a panel of expert judges according to standards-referenced grading procedures and approved by the PEB.
2. **The degree of professional judgement involved in the marking of the subject**
   Subjects involving more holistic professional judgement in marking, such as those with questions of an open-ended nature, will have a greater specified margin for upgrading set at a larger number of standard marks, while those which involve more analytic marking will have a smaller margin with fewer standard marks.

3. **The standard error of measurement (SEM) of the total subject mark of the subject**
   The SEM is an important element in tests and examinations since any measurement inevitably involves measurement error. It provides an indication of the extent to which a candidate's score might vary had he/she taken a similar examination on another day or had his/her script been marked by another marker in a different assessment context. The SEM of the subject mark of individual subjects is calculated and monitored regularly. Details regarding the calculation of SEM are given in the Attachment.

The magnitude of the specified margin across all HKDSE Category A subjects and at all levels, which is determined by the HKEAA with reference to the three factors mentioned above, is a fair and reasonable tolerance limit for the variation of marks after remarking. It should be noted in particular that even if a candidate’s final mark after remarking falls below the cut score of the original grade, he/she will not be downgraded according to the current rechecking and remarking policy.

The HKEAA conducts regular reviews to monitor the appropriateness of the specified margin and adjustments will be proposed to the PEB for consideration and approval if necessary, particularly if there are any major changes in the examination context or assessment structure.
**Attachment: Calculation of the standard error of measurement**

The standard error of measurement (SEM) provides an indication of the extent to which a candidate’s score might vary had he/she taken a similar examination on another day or had his/her script been marked by another marker. It provides a means of estimating the range in which a candidate’s true score (a theoretical value of his/her true ability/knowledge) might lie.

Any measurement inevitably involves measurement error. In educational measurement, a candidate’s score ($S_i$) is simply an observed score that the $i$th candidate got on the examination being considered. It is the sum of the true score ($T_i$) and the error ($E_i$). That is,

$$S_i = T_i + E_i$$

It is generally assumed that, for the whole population, the true score ($T$) and the error ($E$) are statistically independent. Therefore, the variances ($V$) of $T$, $E$ and the observed score ($S$) have the following relationship:

$$V(S) = V(T) + V(E),$$

and the reliability of the examination $R_{xx}$ is defined as the ratio of the variance of $T$ to the variance of $S$:

$$R_{xx} = \frac{V(T)}{V(S)}$$

There are several ways to estimate the value of the reliability, including Cronbach’s alpha and the person separation index.

In the literature of educational measurement, the SEM is generally calculated by means of reliability:

$$SEM = \sqrt{V(S)(1 - R_{xx})},$$

where $\sqrt{V(S)}$ is the standard deviation of the examination.