2020 March Moderation - Report

Meeting Details

Meeting took place in:	South
Which meeting is this report for?	Maths - General Mathematics Level 3

Moderation Details for Calibration - Sample 1

Sample 1 - Please identify each criterion being moderated and IF SELECTED the elements within that criterion	Criterion 8 = Overall
Sample 1 - What rating (or ratings) has the group assigned this sample?	Sample 1 was not discussed during the meeting. The group decided to focus moderation on Sample 2, due to the greatest variance in pre-meeting submissions.

Moderation Details for Calibration - Sample 2

Sample 2 - Please identify each criterion being moderated and IF SELECTED the elements within that criterion	Criterion 8 = Overall
Sample 2 - What rating (or ratings) has the group assigned this sample?	There was a consensus of a score of ~30/35. Discussion ensued regarding interpretation of this score, specifically the various percentage 'cut-offs' for ratings of 'A', 'B' and 'C' used by schools.
Sample 2 - What evidence supports the rating (or ratings) the group has given?	In general, teachers agreed on mark allocation for Question 17 (a), (b), (c), Question 18, Question 19 (a) and (e), Question 20 (a), (b), (c), (e), (f). Points of discussion: Question 17 (b) - agreement that flow questions must always include an explicit statement regarding the number of cuts students must show in their answer.

	Question 19 (b) - discussion regarding mark penalty if students incorrectly complete the critical path analysis of a precedence graph. Question 19 (c) and (d) - discussion regarding awarding of 'error carried forward' if students incorrectly complete the critical path analysis of a precedence graph. Question 19 (f) - agreement that it was unfair to require students to rewrite an entire diagram, especially given this question was not on a double spread. Question 20 (c) - agreement that no penalty should be applied for order reversal in the application of row reduction and column reduction steps; either order achieves the same outcome for questions involving rank. Indeed, students who chose to do a column reduction step first were at an advantage, as they did not then have to apply the Hungarian algorithm, essentially performing only two steps for 3 marks; teachers felt that this should have been rectified during the critiquing of the examination. Question 20 (d) - discussion ensued regarding application of any penalty if students show all allocations in a bipartite graph.
Sample 2 - What evidence would you need to see in order to assign a higher rating (or ratings)?	Analysis of more complex activity networks, involving the determination of ESTs, LSTs and float time (Element 6)
Sample 2 - Summary of group consensus with comments to element level if applicable.	Question 17 - it was noted by teachers that flow questions involving the 'maximum flow-minimum cut' theorem, such as Question 17 in these samples, are not mentioned amongst the elements, however, are detailed in the syllabus Question 20 - there was agreement that no penalty should be applied for reversal of order in the application of row reduction and column reduction steps; either order achieves the same outcome.
Sample 2 - What actions would you recommend for teachers to help the student attain a higher rating (or ratings)?	Opportunities for the analysis of more complex activity networks which involve the determination of ESTs, LSTs and float time (Element 6)
Moderation Details for Calibration - Sample 3	
Sample 3 - Please identify each criterion being moderated and IF SELECTED the elements within that criterion	Criterion 8 = Overall
Sample 3 - What rating (or ratings) has the group assigned this	Sample 3 was not discussed during the meeting. The group decided to focus moderation on Sample 2, due to the greatest variance in pre-meeting submissions.

sample?	

Planning for September Moderation 2020 - Statewide Samples

For all courses please nominate the criteria and elements (if desired) for moderation.	Criterion 7 - Demonstrate knowledge and understanding of applications of trigonometry
State the name of the person who will be providing the samples for September moderation.	Michael Verrier

Sharing Resources

Please record any links to or details of resources that were shared, or describe any assessment strategies that were discussed.	The following is a summary of the robust discussion regarding the protocols followed during moderation. The purpose of moderation is to ensure that A, B, C and t ratings are consistently allocated across schools. Unfortunately, the current practice of reaching consensus by comparing work samples to the elements in the standards does little to achieve this because this is not the way external examinations are marked, nor is it the way schools mark content criteria on tests and mid-year exams. The content criteria are marked internally and externally using a numerical marks/percentage based system to approximate the standards in the course document. The moderation process could be far more effective if this reality was acknowledged as standard practice. A numerical marks/percentage based system will produce consistently allocated ratings (The stated purpose of moderation) if the following 3 points are addressed. 1. Teachers reach consistency in the number of marks awarded to the individual parts of each question. Rightly or wrongly, this has been the main feature of many, if not all, Mathematics moderation meetings. And it is has been observed that the vast majority of teachers have a high degree of consistency in this particular regard. 2. Subjects must use the same threshold percentages in order to convert a number of marks to an A, B, C or t rating. This remains completely unaddressed by the course document and the moderation process. However, anecdotal conversation during moderation meeting has made it very clear that there is no consistency between schools in this regard. 3. Tasks must contain the same ratio of A, B and C content as specified by the standards documents. This also remains completely unaddressed by the course document and the moderation process.

	Clearly it does little to improve consistency of ratings for teachers, to relentlessly address point 1 without ever considering points 2 and 3. There is a great opportunity here to move forward in a genuine way towards awarding consistent ratings in Mathematics across all schools. To do so Curriculum Services needs to acknowledge the marks/percentage based system used by schools, and in external examinations, as valid standard practice. This would in turn pave the way for moderation meetings to also address points 2 and 3 indicated above, and move towards equity for all students studying in our Year 11-12 system.

Course Support

Please provide details of any future focus and ways forward you would like Years 9-12 Curriculum to consider in relation to this course:	Please refer to previous summary. However, to reiterate, there is a great opportunity to move forward in a genuine way towards awarding consistent ratings in Mathematics across all schools. To do so Curriculum Services needs to acknowledge the marks/percentage based system used by schools, and in external examinations, as valid standard practice. This would in turn pave the way for moderation meetings to also address consistency in the application of threshold percentages in order to convert a numerical score to an A, B, C or t rating, and also enable focus on the design of assessment tasks such that these tasks enable students to demonstrate their understanding at an A, B or C level, as specified by the standards.