To whom it may concern

I write to complain about the Day 1 MCAT examination sat on 13 September 2016.

My specific complaints about the paper are:

- Q1ai not starting with an easily accessible question. This could so easily have been 2a or 2d
- the amount of space left for 1aii that could mislead students into thinking they had not found the correct answer. There were 15 lines to write and the answer took me 3 lines
- 1b the only simultaneous equation had language that would make it difficult for ESOL students to access. Lack of space given - 9 lines given and I needed 12 lines
- 1c more difficult than the 'parallel' question on Day 2
- 1d Much more difficult than the examples given in the standard which stated: 'solve simple equations involving exponents'. While individual parts were at the correct curriculum level the combination is higher level thinking
- 2a Harder than day 2 as day 2 did not test the skill of squaring
- 2b Having x-2 on both sides on Day 1 made it harder than Day 2 where there wasn't a common factor. In Day 1 students would be tempted to divide both sides by x-2 to get 2>3.
- 2c This is an exponential inequation. The standard allows for linear inequations and solving simple equations using exponents not exponential inequations. Why did they have to have yet another twist with 123/6 not being a whole number answer?
- 2e An almost identical question to an Excellence question in the 2014 Level 2 Algebra exam (Q2bii). We wold not even contemplate this could be in the Level 1 paper. The Day 1 paper has an answer of sqrt 8 which is harder than the Day 2 paper that factorised 'nicely'
- 2fi question not given in fully factorised form. Given in the most inaccessible for. Why not 4x - x^2 instead of -(x^2-4x). Considerably more difficult form given than Day 2 which was x^2 -4x
- 2fii A quadratic inequality to solve (the front page of the paper stated guess and check 'will not be used as evidence of solving a problem') This is clearly not in the standard which states: 'solving linear equations' and 'solving quadratic equations' NOT solving quadratic inequations. Why did the % need to be asked?
- 3a too many trivial answers like 1 and x^2 +4x-12. The second rectangle question - couldn't another context be given so students who couldn't access Q1ai weren't penalised twice?
- 3b Day 1 a more difficult rearrangement than Day 2
- 3d This is a very lengthy investigation if you don't 'happen upon' using a, b, c ,d for part ii. Since it was part ii, students may have assumed (from part i) that the investigation was of odd numbers so used 2x-1, 2x+1, 2x+3, 2x+5 or something similar. Or they could have assumed it was investigate the numbers given which could correctly be stated as x, x+2, x+3, x+5. Or it could have been any numbers. In an investigation of this nature, enough time should be given to investigate thoroughly. It would take at least 30 minutes. One question in a 60 minute, 20 question paper should not take this amount of time.

I ask that

- there be an urgent revision of the standard to investigate de-emphasis of problem solving and allowance for skills to be tested that would foreshadow the content of the Level 2 algebra standard
- schools be made aware of the moderation process. NZQA moderate us - who are they accountable to?
- future MCAT assessments follow the standard - not what the examiner has decided to examine
- any investigations in a paper be minor and well able to be completed within the time frame allowed for that question
- at least one example paper and resources be provided in future
- the standard adequately gives examples of the level of difficulty of questions
- the MCAT does not include questions requiring skills that are clearly not in the standard

Further

I would like an apology to our students from NZQA and the option for schools to be allowed to give the best grade from either the MCAT or the school derived grade assessment.

Nothing will make up for what has happened, but NZQA stating to our principal that 'they are not going to do anything because it is only 4 credits, schools can work out who is going into Year 12 from their own exams, it is too technically difficult to give the better of derived grade or MCAT for such a large cohort (what about the German exam they 'botched' a few years ago and what they managed to do for Christchurch students after the earthquake)and some schools would be very unhappy if the derived grade option were pursued, is arrogant, non conciliatory and certainly uncaring about our students. I would ask for transparency here - how many schools would be unhappy? - could we go with the majority? - can we have the evidence? An apology would be a start to us working together to make this right for our students and surely students are what the core business of schools and NZQA is about.

Nothing will make up for the students who have put in blank papers or the students who have used the derived grade exams as an indicator of where they need to improve and then worked hard to address those areas before the MCAT examination. NZQA can say all it likes about waiting until the papers are marked with the amended schedule to get their grade distribution but it will NOT make up for the upset students have faced in the first external examination they have sat and the first examination portal into STEM subjects. In a properly set paper only minor adjustments should be needed to amend a marking schedule. It seems clear to me that there have been major adjustments in 2016. For example in 2015 there were 7 opportunities to get recognition for Excellence and in the years 2011, 2012, 2013, 2014 there were 6 opportunities. In 2016 Day 1 there were 11 opportunities. Also in 2011, 2012, 2013, 2015 solving a quadratic equation is an Achieved level question; in 2016 it is Merit level. It is my understanding that if there has to be major adjustments to a marking schedule then the paper has NOT been well set.

Students who sat the 2016 MCAT papers and Mathematics teachers throughout the country deserve an apology, an explanation and an assurance that NZQA will work with them to rectify as much as possible the issues that have arisen as a result of this examination.

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