



Course Report 2017

Subject	Lifeskills Mathematics
Level	National 5

The statistics used in this report have been compiled before the completion of any Post Results Services.

This report provides information on the performance of candidates which it is hoped will be useful to teachers, lecturers and assessors in their preparation of candidates for future assessment. It is intended to be constructive and informative and to promote better understanding. It would be helpful to read this report in conjunction with the published assessment documents and marking instructions.

Section 1: Comments on the assessment

Summary of the course assessment

Component 1 — question paper: Paper 1 (non-calculator)

On the whole, this paper performed as expected.

Question 7(b) was more challenging to candidates than had been anticipated, with many not including the cost of the enamel in the overall cost of the badge.

This was therefore taken into account when setting the grade boundaries.

Component 2 — question paper: Paper 2 (case studies)

This paper performed as expected.

Section 2: Comments on candidate performance

Areas in which candidates performed well

Component 1 — question paper: Paper 1 (non-calculator)

Question 3: Most candidates plotted the points onto the scatter graph accurately and could read a result from their line of best fit.

Question 5(a): Most candidates could interpret the information given and read a result from the table.

Question 5(b): Most candidates could calculate a percentage accurately.

Component 2 — question paper: Paper 2 (case studies)

Question 2(a): Most candidates could calculate the value of the shares.

Question 3: Most candidates could calculate the monthly instalment required.

Question 4: Most candidates could interpret the stem and leaf diagram and complete the boxplot accurately.

Question 5(c): Most candidates could work with foreign exchange.

- Question 5(d): Most candidates interpreted probability correctly.
- Question 6(b): Most candidates knew how to find the weekly gross pay.
- Question 7(a): Most candidates could find the mean and standard deviation.
- Question 8(a): Most candidates knew how to use Pythagoras' Theorem to calculate the length of the door.

Areas which candidates found demanding

Component 1 — question paper: Paper 1 (non-calculator)

- Question 4: Many candidates were unable to compare gradients given as fractions.
- Question 5(b): Many candidates were unable to distinguish between the discount offered and the sale price. This led to many candidates comparing a discount with a sale price.
- Question 6: Most candidates were unable to work with ratio/proportion successfully. Most failed to interpret the word total and did not sum the amounts won by the individual teachers.
- Question 7(a): Many candidates were unable to find the area of a composite shape consisting of a rectangle and triangles.
- Question 7(b): Most candidates failed to include the cost of the enamel in the overall cost of the badge.
- Question 8: Many candidates struggled to read the data from the table and then apply their result to the stacked bar graph.
- Question 9(b): Very few candidates interpreted the question correctly to find the area of the rectangular piece of plastic.

Component 2 — question paper: Paper 2 (case studies)

- Question 1: Very few candidates knew the correct units to use for volume.
- Question 5(a): Very few candidates were able to convert a length in centimetres to a length in kilometres.
- Question 5(b): Although most candidates knew the correct formula to use to find the speed, many could not convert the speed into knots. Most did not round their answer to 2 significant figures.

Question 6(a): Very few candidates knew how to find the maximum number of cages that could fit into the lorry. Many divided the length, breadth and height of the lorry by those of the cage, but then added their answers instead of multiplying them to find the number in a single layer.

Many candidates only tried one arrangement of the cages.

Many candidates simply divided the overall volume of the lorry by the volume of a single cage, and didn't consider the actual number that would fit in.

Question 7(b): Most candidates failed to make two valid comments comparing the mean and standard deviation. The comment about the mean must refer to average temperatures, and the comment about the standard deviation must refer to the spread of the temperatures.

Many candidates did not refer to the context of the question in their comments.

Question 8(b): Many candidates were unable to find the area of the pentagonal tray.

Question 8(c): Many candidates were unable to find the area of the composite shape. Many candidates attempted to subtract the area of a quarter circle from the area of the whole square.

Section 3: Advice for the preparation of future candidates

Component 1 — question paper: Paper 1 (non-calculator)

Although there was an improvement in the overall standard of non-calculator work this year, there are still some areas of concern:

- ◆ The calculation of a percentage, including 2.5%, without a calculator proved to be challenging for many.
- ◆ Most candidates did not know how to compare gradients written in fractional form.
- ◆ Ratio/proportion was not completed well by most candidates.
- ◆ Composite areas were not tackled well in either paper.

Component 2 — question paper: Paper 2 (case studies)

There was clear evidence that candidates knew the correct strategy to use in most of the questions.

The calculation of mean and standard deviation was done well, as was working with foreign currency and calculating gross/net pay.

The main areas of concern in paper 2 were the comparison of calculated statistics and finding the maximum number of cages that would fit into the lorry.

Candidates need to ensure that they complete calculations accurately and do not round prematurely.

Grade Boundary and Statistical information:

Statistical information: update on Courses

Number of resulted entries in 2016	2796
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Number of resulted entries in 2017	2599
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Statistical information: Performance of candidates

Distribution of Course awards including grade boundaries

Distribution of Course awards	%	Cum. %	Number of candidates	Lowest mark
Maximum Mark -				
A	12.5%	12.5%	325	63
B	15.4%	27.9%	400	53
C	18.6%	46.5%	483	44
D	11.5%	57.9%	298	39
No award	42.1%	-	1093	-

General commentary on grade boundaries

- ◆ While SQA aims to set examinations and create marking instructions which will allow a competent candidate to score a minimum of 50% of the available marks (the notional C boundary) and a well prepared, very competent candidate to score at least 70% of the available marks (the notional A boundary), it is very challenging to get the standard on target every year, in every subject at every level.
- ◆ Each year, SQA therefore holds a grade boundary meeting for each subject at each level where it brings together all the information available (statistical and judgemental). The Principal Assessor and SQA Qualifications Manager meet with the relevant SQA Business Manager and Statistician to discuss the evidence and make decisions. The meetings are chaired by members of the management team at SQA.
- ◆ The grade boundaries can be adjusted downwards if there is evidence that the exam is more challenging than usual, allowing the pass rate to be unaffected by this circumstance.
- ◆ The grade boundaries can be adjusted upwards if there is evidence that the exam is less challenging than usual, allowing the pass rate to be unaffected by this circumstance.
- ◆ Where standards are comparable to previous years, similar grade boundaries are maintained.
- ◆ An exam paper at a particular level in a subject in one year tends to have a marginally different set of grade boundaries from exam papers in that subject at that level in other years. This is because the particular questions, and the mix of questions, are different. This is also the case for exams set in centres. If SQA has already altered a boundary in a particular year in, say, Higher Chemistry, this does not mean that centres should necessarily alter boundaries in their prelim exam in Higher Chemistry. The two are not that closely related, as they do not contain identical questions.
- ◆ SQA's main aim is to be fair to candidates across all subjects and all levels and maintain comparable standards across the years, even as arrangements evolve and change.