Course report 2023

National 5 Graphic Communication

This report provides information on candidates' performance. Teachers, lecturers and assessors may find it useful when preparing candidates for future assessment. The report is intended to be constructive and informative, and to promote better understanding. You should read the report in conjunction with the published assessment documents and marking instructions.

The statistics in the report were compiled before any appeals were completed.

Grade boundary and statistical information

Statistical information: update on courses

Number of resulted entries in 2022: 4,945

Number of resulted entries in 2023: 5,151

Statistical information: performance of candidates

Distribution of course awards including minimum mark to achieve each grade

A	Number of candidates	1,439	Percentage	27.9	Cumulative percentage	27.9	Minimum mark required	72
B	Number of candidates	1,267	Percentage	24.6	Cumulative percentage	52.5	Minimum mark required	60
C	Number of candidates	1,115	Percentage	21.6	Cumulative percentage	74.2	Minimum mark required	49
D	Number of candidates	794	Percentage	15.4	Cumulative percentage	89.6	Minimum mark required	37
No award	Number of candidates	536	Percentage	10.4	Cumulative percentage	100	Minimum mark required	N/A

Please note that rounding has not been applied to these statistics.

You can read the general commentary on grade boundaries in the appendix.

In this report:

- 'most' means greater than 70%
- 'many' means 50% to 69%
- 'some' means 25% to 49%
- 'a few' means less than 25%

You can find more statistical reports on the statistics and information page of SQA's website.

Section 1: comments on the assessment

The question paper and assignment were slightly more demanding than intended. The grade boundaries were adjusted to account for this.

Question paper

The question paper sampled the following knowledge and understanding content from the course specification:

- computer-aided design techniques
- graphic items in specific situations
- manual and electronic methods of graphic communication
- spatial awareness
- use of colour, layout, and presentation techniques

Modifications to assessment continued in session 2022–23. The question paper did not sample 'drawing standards, protocols and conventions', and it had 65 marks. The duration was 1 hour and 30 minutes.

Assignment

The assignment sampled the following skills content from the course specification:

- preliminary graphics
- production graphics
- promotional graphics

Section 2: comments on candidate performance

Areas that candidates performed well in

Question paper

Question 1(a)

Most candidates correctly identified both panels from the surface development.

Question 1(b)

Most candidates identified the correct true shape of the sloping surface.

Question 1(c)

Most candidates identified the correct plan view.

Question 1(d)

Most candidates described the 3D CAD process of extruding a circle, extrude-subtracting a circle, adding a chamfer to the correct feature and dimension, and adding a fillet to the correct feature and dimension.

Question 1(f)

Most candidates explained the reasons graphic icons were used in the design of the mobile phone app. Most responses gave 'universal understanding' and 'no language barrier' as explanations.

Question 2(a)(i)

Many candidates explained depth correctly.

Question 2(a)(ii)

Many candidates explained contrast correctly.

Question 2(a)(iii)

Many candidates explained dominance correctly.

Question 2(b)

Many candidates explained an advantage to a graphic designer of using thumbnails.

Question 2(c) (i, ii, iii, iv)

Most candidates correctly identified or labelled text wrap, reverse, drop shadow, and flow text along a path.

Question 2(e)(i)

Most candidates correctly identified portrait orientation.

Question 2(e)(ii)

Many candidates explained the relationship between A3 and A4 paper sizes correctly.

Question 2(f)(i)

Many candidates described an advantage of remote working in reducing a company's environmental impact.

Question 2(f)(ii)

Most candidates described two ways to reduce the environmental impact of printed materials.

Question 3(b)

Many candidates correctly stated the pictorial view as being oblique.

Question 3(c)

Most candidates identified the correct exploded pictorial view.

Question 3(e)

Many candidates described features from the instruction booklet that made the instructions easy to follow.

Question 4(c)(i)

Most candidates explained how to create a tint of a colour.

Question 4(c)(ii)

Most candidates stated the name of a secondary colour.

Question 5(b)

Many candidates identified the correct plan view.

Assignment

Task 1

For 1(a), most candidates were able to successfully 3D CAD model the components and orientate them correctly.

For 1(b), most candidates were able to assemble the parts correctly and produce the views in the correct orientation. Most candidates were also able to produce an appropriate sectional view.

For 1(c), most candidates were able to produce an exploded view to the correct orientation.

For 1(d), most candidates produced their drawings using third-angle projection and included a suitable title block.

Task 2

For 2(a), most candidates showed a very good understanding of how to produce a rendered version of the lamp.

For 2(b), most candidates performed very well. Most thumbnails were clear and had the correct use of depth identified.

For 2(c), most candidates produced the layout to the correct dimensions. Many were able to correctly identify the design elements and/or principles used.

Task 3

For 3(a), many candidates displayed a good understanding of orthographic projection. This was a great improvement on previous years. Most candidates applied dimensions correctly and demonstrated a clear understanding of the application of third-angle projection.

For 3(c), most candidates performed reasonably well in the pictorial sketching and rendering areas of this task.

Areas that candidates found demanding

Question paper

Question 1(e)

Many candidates did not state the correct names of the five 2D CAD drawing tools. Most candidates did not state the correct terms for ‘trim’ and ‘scale/zoom’.

Question 2(d)

Most candidates did not accurately describe how alignment was created in the given layout.

Question 3(a)

Many candidates did not explain how orthographic drawings are used in manufacturing.

Question 3(d)

Although most candidates achieved marks in this question, only some candidates correctly described the full 3D CAD process for the given product. Few candidates were able to describe the correct position of the small holes.

Question 3(f)

Some candidates explained an advantage of using guidelines or snap to guidelines.

Question 3(g)

Some candidates described two additional features that could be added to online instructions. Many candidates incorrectly stated features.

Question 4(a)

Many candidates did not explain an advantage of 3D printing when developing new products.

Question 4(b)

Most candidates did not state the correct 3D CAD illustration terms applied to the two stages in the question.

Question 4(d)(i) and (ii)

A few candidates were able to state the correct tertiary colours.

Question 5(a)

Some candidates correctly calculated the sizes for all the missing dimensions. Many candidates did not correctly calculate the sizes for (v) and (vi).

Assignment

Task 1

For 1(c), many candidates found it challenging to explode all the components in the correct alignment.

For 1(d), many candidates did not apply centre lines where they were required. Many candidates did not display dimensions following British Standards. Cutting planes, overlapping drawings, and poor projection of the sectional view were common. Some candidates did not label their drawing views or give each of the component drawings titles.

Task 2

For 2(c), most candidates did not produce a high-quality desktop publishing (DTP) layout. Many candidates did not justify the effect of their chosen design elements and/or principles on their layout.

Task 3

For 3(a), many candidates incorrectly applied hidden detail in their responses.

For 3(b), many candidates struggled when projecting the views from the elevation. Many candidates did not demonstrate knowledge of the relationship between the depth of a plan view and an end elevation.

Some candidates did not attempt tasks 3(b) and 3(c).

Section 3: preparing candidates for future assessment

Question paper

Many candidate responses about the design principle of alignment lack detail. For this design principle, candidates must describe the type of alignment between two separate elements to achieve a mark, for example left-hand alignment or central alignment. Responses that refer to two elements being aligned but do not describe the type of alignment cannot achieve marks.

Centres should reinforce tertiary colours during learning and teaching. This year, candidates did not respond well to colour theory questions about tertiary colours.

Centres should ensure that candidates use the correct terminology, as detailed in the course specification, when stating the names of 2D CAD terms and 3D CAD illustration techniques.

Noticeably fewer candidates are using incorrect 3D CAD modelling terms, such as 'extrude-cut'. Centres should ensure that candidates explicitly refer to the centre axis and provide the correct angle of revolution when responding to 3D CAD questions with a revolved feature. Candidates should understand that they achieve marks for identifying the correct axis and stating the correct angle of revolution.

Centres should ensure candidates are aware of the uses and advantages of 3D printing.

Assignment

Candidates must carry out the assignment independently after all the course content is delivered. We recommend using the last period of class time before candidates begin the assignment to take them through the instructions and the assignment tasks to ensure they understand the assignment conditions and requirements. Centres should not interrupt the assignment with periods of learning and teaching.

Some candidates may require reminders in timekeeping as they work through the assignment. Time prompts could be useful for candidates to help keep them on track to finish the assignment within the 8-hour time period.

Task 1

Centres should ensure their templates for producing the production graphics across task 1 are suitable and are set up correctly.

Many candidates produce orthographic views in a scale too small for markers to see the detail of the drawings. Candidates should produce their orthographic drawings to a suitable scale, large enough to show the detail in each view, and to enable them to clearly annotate all views.

Some candidates manually override incorrect dimensions in task 1 to make incorrect models appear accurate. This is not good practice. If a candidate notices that they have not

modelled a part correctly when they add dimensions, they should edit the part, not override the dimensions on the production drawings.

Some candidates produce assemblies that are not orientated with a vertical axis. Centres should ensure that candidates know how to set parts in assemblies to the correct orientation.

Some candidates do not demonstrate knowledge of exploding parts in an exploded isometric view with the parts being correctly aligned. Centres should address this during learning and teaching.

Most candidates find it challenging to apply British Standards, particularly using centre lines correctly, applying cutting planes, and applying dimensions correctly. Producing views at an appropriate scale can help candidates with these aspects.

Task 2

Some candidates fully annotate their thumbnails, detailing how they used a range of design elements and/or principles. When asked to identify a design element and/or principle, candidates do not need to describe how it is to be used. They simply have to label these. Please refer to understanding standards material for examples of this.

Teachers and lecturers should support candidates to creatively use the design elements and/or principles to help improve performance in DTP. Candidates should be able to demonstrate an understanding of how to apply the design elements and principles to a high quality in a DTP layout.

Task 3

Teachers and lecturers should remind candidates not to use drawing boards and equipment during task 3 of their assignment. Almost all candidates follow this instruction from the assignment assessment task. However, some candidates use drawing boards and/or drawing equipment and/or measure and/or produce scale drawings during the sketching task and receive 0 marks for task 3.

If candidates use digital sketching methods, centres must ensure that candidates do not use shape tools as this approach simulates using vector graphics. Similarly, candidates must not use software that creates 3D models and converts them to 2D sketches. This is because the assignment assesses the skill of sketching.

Most candidates find applying hidden detail in their orthographic sketching challenging. Teachers and lecturers should support candidates to understand how to apply hidden detail in orthographic sketches.

Candidates can find sketching in good proportions challenging. Teachers and lecturers should support candidates to understand how to sketch views in good proportions.

Appendix: general commentary on grade boundaries

SQA's main aim when setting grade boundaries is to be fair to candidates across all subjects and levels and maintain comparable standards across the years, even as arrangements evolve and change.

For most National Courses, SQA aims to set examinations and other external assessments and create marking instructions that allow:

- a competent candidate to score a minimum of 50% of the available marks (the notional grade C boundary)
- a well-prepared, very competent candidate to score at least 70% of the available marks (the notional grade A boundary)

It is very challenging to get the standard on target every year, in every subject at every level. Therefore, SQA holds a grade boundary meeting for each course to bring together all the information available (statistical and qualitative) and to make final decisions on grade boundaries based on this information. Members of SQA's Executive Management Team normally chair these meetings.

Principal assessors utilise their subject expertise to evaluate the performance of the assessment and propose suitable grade boundaries based on the full range of evidence. SQA can adjust the grade boundaries as a result of the discussion at these meetings. This allows the pass rate to be unaffected in circumstances where there is evidence that the question paper or other assessment has been more, or less, difficult than usual.

- The grade boundaries can be adjusted downwards if there is evidence that the question paper or other assessment has been more difficult than usual.
- The grade boundaries can be adjusted upwards if there is evidence that the question paper or other assessment has been less difficult than usual.
- Where levels of difficulty are comparable to previous years, similar grade boundaries are maintained.

Grade boundaries from question papers in the same subject at the same level tend to be marginally different year on year. This is because the specific questions, and the mix of questions, are different and this has an impact on candidate performance.

This year, a package of support measures was developed to support learners and centres. This included modifications to course assessment, retained from the 2021–22 session. This support was designed to address the ongoing disruption to learning and teaching that young people have experienced as a result of the COVID-19 pandemic while recognising a lessening of the impact of disruption to learning and teaching as a result of the pandemic. The revision support that was available for the 2021–22 session was not offered to learners in 2022–23.

In addition, SQA adopted a sensitive approach to grading for National 5, Higher and Advanced Higher courses, to help ensure fairness for candidates while maintaining

standards. This is in recognition of the fact that those preparing for and sitting exams continue to do so in different circumstances from those who sat exams in 2019 and 2022.

The key difference this year is that decisions about where the grade boundaries have been set have also been influenced, where necessary and where appropriate, by the unique circumstances in 2023 and the ongoing impact the disruption from the pandemic has had on learners. On a course-by-course basis, SQA has determined grade boundaries in a way that is fair to candidates, taking into account how the assessment (exams and coursework) has functioned and the impact of assessment modifications and the removal of revision support.

The grade boundaries used in 2023 relate to the specific experience of this year's cohort and should not be used by centres if these assessments are used in the future for exam preparation.

For full details of the approach please refer to the National Qualifications 2023 Awarding — Methodology Report.

