

N5

National 5
Coursework
Assessment Task



National 5 Graphic Communication Assignment Assessment task

Valid for session 2023-24 only.

This assessment is given to centres in strictest confidence. You must keep it in a secure place until it is used.

This edition: October 2024 (version 1.0)

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Introduction

This document contains instructions for teachers and lecturers and instructions for candidates for the National 5 Graphic Communication assignment.

This assignment has 40 marks out of a total of 120 marks available for the course assessment.

This is one of two course assessment components. The other component is a question paper.

Instructions for teachers and lecturers

You must conduct the assignment under a high degree of supervision and control. This means:

- ◆ candidates must be within your direct sight
- ◆ candidates must not interact with each other
- ◆ candidates must not have access to email, the internet and mobile phones
- ◆ candidates must complete their work independently – no group work is permitted
- ◆ classroom display materials that might provide assistance must be removed or covered
- ◆ with no interruption for learning and teaching
- ◆ in a classroom environment

Time

Candidates have 8 hours to complete the assignment, starting at an appropriate point in the course after all content has been delivered. Once candidates begin, they must continue in each subsequent class period until the permitted time allocation has been used up.

You have a responsibility to manage candidates' work, distributing it at the beginning and collecting it at the end of each session, and storing it securely in-between. This activity does not count towards the total time permitted for candidates to complete the assignment.

Resources

This is a closed-book assessment. Candidates must not have access to learning and teaching materials, the internet, notes, exemplar materials, resources on classroom walls or anything similar.

There may be instances where restriction of internet and/or network use is prohibited (for example, if you have a local authority-managed network with specific limitations or CAD software that is web-based). However, it remains your professional responsibility to make every effort to meet the assessment conditions.

Each assessment task includes instructions and details of any equipment or materials required. Candidates can also use normal classroom equipment, software and hardware (such as CAD and DTP software, and PCs to run the software) to complete the tasks.

Reasonable assistance

Candidates must progress through each stage of the assignment without your intervention or guidance, having acquired the skills earlier in the course.

Once candidates complete the assignment, you must not return it to them for further work. You must not provide feedback to candidates or offer an opinion on the perceived quality or completeness of the assignment response, at any stage.

You can provide reasonable assistance to support candidates with the following aspects of their assignment:

- ◆ printing, collating, stapling and labelling their evidence to ensure it is in the format specified by SQA
- ◆ ensuring candidates have all the materials and equipment required to complete the assignment
- ◆ understanding the information outlined in these instructions

Evidence

All candidate evidence (whether created manually or electronically) must be submitted to SQA in paper-based format.

Each task details what evidence is required and how many pages are expected. This is a guide to ensure that candidates do not produce too much work or spend too long on a single task. Single-sided A3 pages are preferred and are typically the most suitable for the tasks; however, it is acceptable to submit A4 pages if an A3 printer is not available.

Each piece of work must be labelled with the task number, for example, task 1a, and the back of each page must be clearly labelled with candidate details.

Alteration or adaptation

You must not alter, adapt or modify the assignment in any way. This includes moving the content of the assignment into a different format or workbook. All candidates must undertake the assignment exactly as it is provided.

Volume

Candidates should present their work on a maximum of eight single-sided A3 pages.

This figure is given to indicate the volume of evidence required; however, no penalty is applied where candidates exceed this. Full details of evidence requirements are contained within each assessment task.

Specific instructions for teachers and lecturers

You must follow these specific instructions. You must ensure that candidates are aware of the assessment conditions and know what they should do for each task.

Data sheets 1a and 1f feature pictorial views of the underside of components. Reproducing pictorial views of the underside of components is not part of the National 5 course so, you should ensure your candidates understand what each view on data sheets 1a and 1f shows.

Prior to candidates starting the assignment, you must download the following electronic files for their use. You must keep these files secure and candidates must not access them prior to assessment.

- ◆ data sheet 2a – graphic of logo
- ◆ data sheet 2b – images 1 to 6
- ◆ data sheet 2c – images 7 to 12

This assignment has three tasks, all of which are mandatory. Candidates must complete the tasks in order.

Each task has a notional time allocated to it. This is not mandatory and is an indication of how long candidates should spend on the task.

Task 1 – 13 marks: producing production drawings for a robotic vacuum
(suggested time 2 to 3 hours)

- ◆ Task 1: candidates must produce their production drawings electronically and generate them from a 3D CAD model.

Task 2 – 12 marks: producing promotional graphics for a robotic vacuum
(suggested time 2 hours)

- ◆ Task 2a: candidates must complete this electronically.
- ◆ Task 2b: candidates must complete this electronically.
- ◆ Task 2b: candidates must annotate where they have used three design elements and principles from the list in the task.
- ◆ Task 2b: candidates must effectively use **flow text along a path**.

Task 3 – 15 marks: producing preliminary graphics for a charging station
(suggested time 2 to 3 hours)

- ◆ Tasks 3a, 3b and 3c: candidates are expected to complete these manually. If they use an electronic method, it **must not** be 3D CAD software, as they will gain no marks.
- ◆ Tasks 3a,3b and 3c: if candidates use electronic sketching software, they are only permitted to use a straight edge. They **must not** use any other tools.
- ◆ Tasks 3a, 3b and 3c: candidates **must not** use drawing boards and set squares.
- ◆ Tasks 3a, 3b and 3c: candidates will gain no marks if there is evidence they have used drawing instruments other than a straight edge.

Note: candidates must not trace drawings for any part of the assignment. They will gain no marks for traced drawings.

All electronically generated evidence must be printed and compiled for uplift by SQA.

Instructions for candidates

This assessment applies to the assignment for National 5 Graphic Communication.

This assignment has 40 marks out of a total of 120 marks available for the course assessment.

It assesses the following skills, knowledge and understanding:

- ◆ demonstrating graphic design skills and creativity
- ◆ using graphic communication technologies
- ◆ producing preliminary, production and promotional graphic items in response to a situation or problem
- ◆ using illustration techniques to create graphics with relevant visual impact
- ◆ producing 2D and 3D production drawings, applying appropriate standards, protocols and conventions (drawing includes manual or electronic production methodologies)
- ◆ reviewing and evaluating your progress, giving justification for your choice of graphic items and the graphic communication techniques employed

This is a closed-book assessment. Your teacher or lecturer will let you know if there are any specific conditions for doing this assessment.

Read each task fully before starting.

Note: you must not trace drawings for any part of the assignment. You will gain no marks for traced drawings.

In this assessment, you have to:

- ◆ produce a range of graphics in response to a series of tasks, which will test aspects of the skills and knowledge listed above
- ◆ complete all of the tasks in the order presented

You have 8 hours to complete the assignment, excluding the time required to set up and clear away any equipment you need, and for any printing that is required.

You must not use any text, images, or other items from any other source unless you created them during this 8-hour assignment.

The assignment has three tasks, with marks allocated as follows:

Task 1 – 13 marks: producing production drawings for a robotic vacuum.
(suggested time 2 to 3 hours)

Task 2 – 12 marks: producing promotional graphics for a robotic vacuum.
This includes a CAD-rendered robotic vacuum and work for a digital promotional graphic layout for the robotic vacuum to display on a tablet.
(suggested time 2 hours)

Task 3 – 15 marks: producing preliminary graphics for a charging station.
(suggested time 2 to 3 hours)

Your teacher or lecturer will provide you with:

- ◆ tasks 1 to 3
- ◆ data sheets 1a to 1f, 2a to 2c, and 3a to 3c
- ◆ electronic files for task 2

Assessment conditions

This is a closed-book assessment. You must undertake the assignment under a high degree of supervision and control. This means:

- ◆ you must be within direct sight of your teacher or lecturer
- ◆ you must not interact with other candidates
- ◆ you must not have access to email, the internet and mobile phones
- ◆ you must complete your work independently – no group work is permitted

You have 8 hours to complete the assignment. Once you begin, you must continue in each subsequent class period until the permitted time allocation has been used up.

Reasonable assistance

You must progress through each stage of the assignment without intervention or guidance from your teacher or lecturer.

Once you have completed the assignment, your teacher or lecturer cannot return it to you for further work. They will not give you feedback on your assignment response at any stage. They can give you reasonable assistance to support with the following aspects of your assignment:

- ◆ printing, collating, stapling and labelling your evidence to ensure it is in the format specified by SQA
- ◆ ensuring you have all the materials and equipment required to complete the assignment
- ◆ understanding the information in these instructions

Submitting your work

You must label each piece of evidence with the task number (for example task 1a) and the back of each page must be clearly labelled with your:

- ◆ name
- ◆ date of birth
- ◆ Scottish Candidate Number (SCN)
- ◆ centre name
- ◆ centre number

Task 1: robotic vacuum production drawings

A technology company called Gleemholm is launching a new robotic vacuum cleaner.

Using the information shown on data sheets 1a to 1f, model and assemble the robotic vacuum components using 3D CAD software.

From these models, produce production drawings that will allow the robotic vacuum to be manufactured.

- 1a Produce suitable component orthographic views of the five components of the robotic vacuum.

You must produce an elevation and a plan for each component:

- ◆ wheel
- ◆ steering support
- ◆ sweeper
- ◆ dust tray
- ◆ top body

You must:

- ◆ use third-angle projection
- ◆ **show all** hidden detail
- ◆ produce the elevation of each component in the same orientation as shown on the data sheets
- ◆ include enough dimensions to allow for manufacture
- ◆ include annotations
- ◆ produce the views to a suitable scale

(7 marks)

- 1b Produce an elevation, plan and two sectional end elevations of the assembled robotic vacuum.

The sectional end elevation on the left-hand side **must** cut through the vertical centre of the steering support and the sweepers. The sectional end elevation on the right-hand side **must** cut through the vertical centres of the wheels.

You must:

- ◆ produce these views at a scale of 1:3
- ◆ use third-angle projection
- ◆ not show hidden detail
- ◆ produce the views as line drawings
- ◆ produce the elevation in the same orientation as shown on data sheet 1a

(4 marks)

- 1c Include correct British Standard conventions and line types on all your drawings.

(2 marks)

Note: you must create the production drawings for task 1 electronically and print them out.

You should complete task 1 on a maximum of three single-sided A3-sized pages.

You should spend approximately 2 to 3 hours on task 1.

Your completed assignment (tasks 1 to 3) should be on no more than eight single-sided A3-sized pages.

Task 2: robotic vacuum promotional graphics

Gleemholm would like you to produce a CAD-rendered pictorial illustration of the robotic vacuum and a promotional graphic layout to display on a tablet.

Your teacher or lecturer will give you electronic files of the graphics from data sheets 2a to 2c.

You must:

- ◆ use at least one of the images provided – you can use the images as they are, or you can edit them to suit your design
- ◆ not use text or images from any other source, such as the internet – you will gain 0 marks for task 2b if you do this

2a Produce a CAD-rendered pictorial illustration of the assembled robotic vacuum you modelled in task 1, complete with appropriate materials, highlights and shadows.

You must use the following materials when producing your CAD render:

- ◆ wheels – rubber
- ◆ steering support – rubber
- ◆ sweepers – rubber
- ◆ dust tray – aluminium
- ◆ top body – aluminium

(1 mark)

2b Produce a promotional graphic layout to display on a tablet.

The company has specified that the graphic layout **must**:

- ◆ have the dimensions and orientation shown on data sheet 2a
- ◆ have high-quality visual impact
- ◆ make effective use of the company logo and extended text on data sheet 2a
- ◆ make effective use of at least one image from data sheets 2b and 2c
- ◆ use only the images supplied by the company (see data sheets 2b and 2c)

You **must** make effective use of at least three of the following design elements and principles in your graphic layout.

- ◆ alignment
- ◆ depth
- ◆ contrast
- ◆ unity
- ◆ dominance
- ◆ use of colour
- ◆ line

You **must** also include effective use of **flow text along a path** in your graphic layout.

You **must** annotate your graphic layout.

- ◆ **Identify** where you have used **three** of the design elements and principles in your graphic layout. There is no requirement for you to describe the effect of the design elements and principles on your layout.
- ◆ **Identify** where you have used **flow text along a path** in your graphic layout.

(11 marks)

You should complete task 2 on a maximum of three single-sided A3-sized pages.

You should spend approximately 2 hours on task 2.

Your completed assignment (tasks 1 to 3) should be on no more than eight single-sided A3-sized pages.

Task 3: charging station

Gleemholm is including a charging station with the robotic vacuum.

Using the drawings from data sheets 3a to 3c, produce preliminary sketches for the charging station.

This task assesses your sketching skills. **Do not** use a drawing board or a set square. If you measure, trace or use any drawing instruments other than a straight edge, you will gain no marks for this task.

You should complete this task manually. If you use an electronic method, it **must not** be 3D CAD software, you will gain no marks if this is used.

- 3a Produce preliminary orthographic sketches of the elevation, end elevation and plan of each component of the charging station.

There is no requirement for you to add dimensions to your sketches.

You **must**:

- ◆ sketch the elevation of each component of the charging station in the direction shown on data sheets 3a to 3c
- ◆ use third-angle projection
- ◆ show all hidden detail

(6 marks)

- 3b Produce preliminary orthographic sketches of the elevation, end elevation and plan of the assembled charging station.

You **must**:

- ◆ sketch the elevation of the assembled charging station in the direction shown on data sheet 3a
- ◆ use third-angle projection
- ◆ not show hidden detail

Do not include the robotic vacuum as part of your sketch.

(4 marks)

3c Produce a rendered pictorial sketch of the assembled charging station, showing appropriate highlights, shadows and materials.

The components of the charging station must be made from the following materials:

- ◆ base – plastic
- ◆ stem – metal
- ◆ power supply – plastic

Do not show hidden detail.

Do not include the robotic vacuum as part of your sketch.

(5 marks)

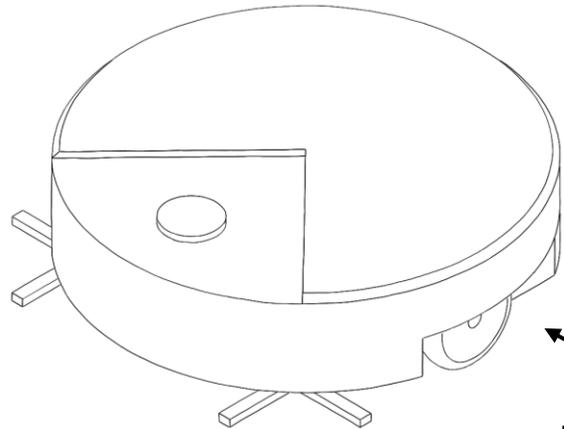
You should complete task 3 on a minimum of two single-sided A3-sized pages.

You should spend approximately 2 to 3 hours on task 3.

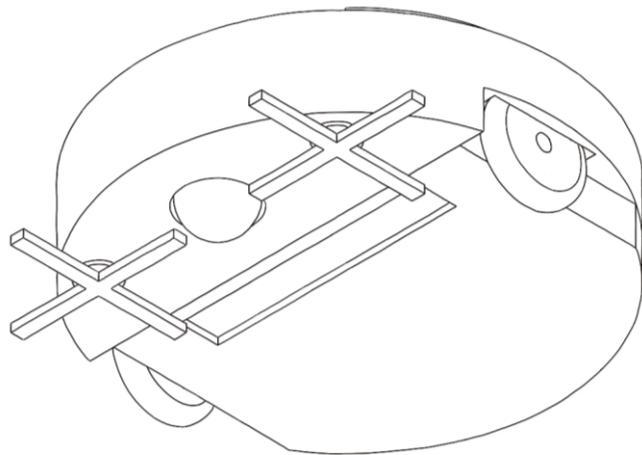
Your completed assignment (tasks 1 to 3) should be on no more than eight single-sided A3-sized pages.

Data sheet 1a

Pictorial views and exploded view

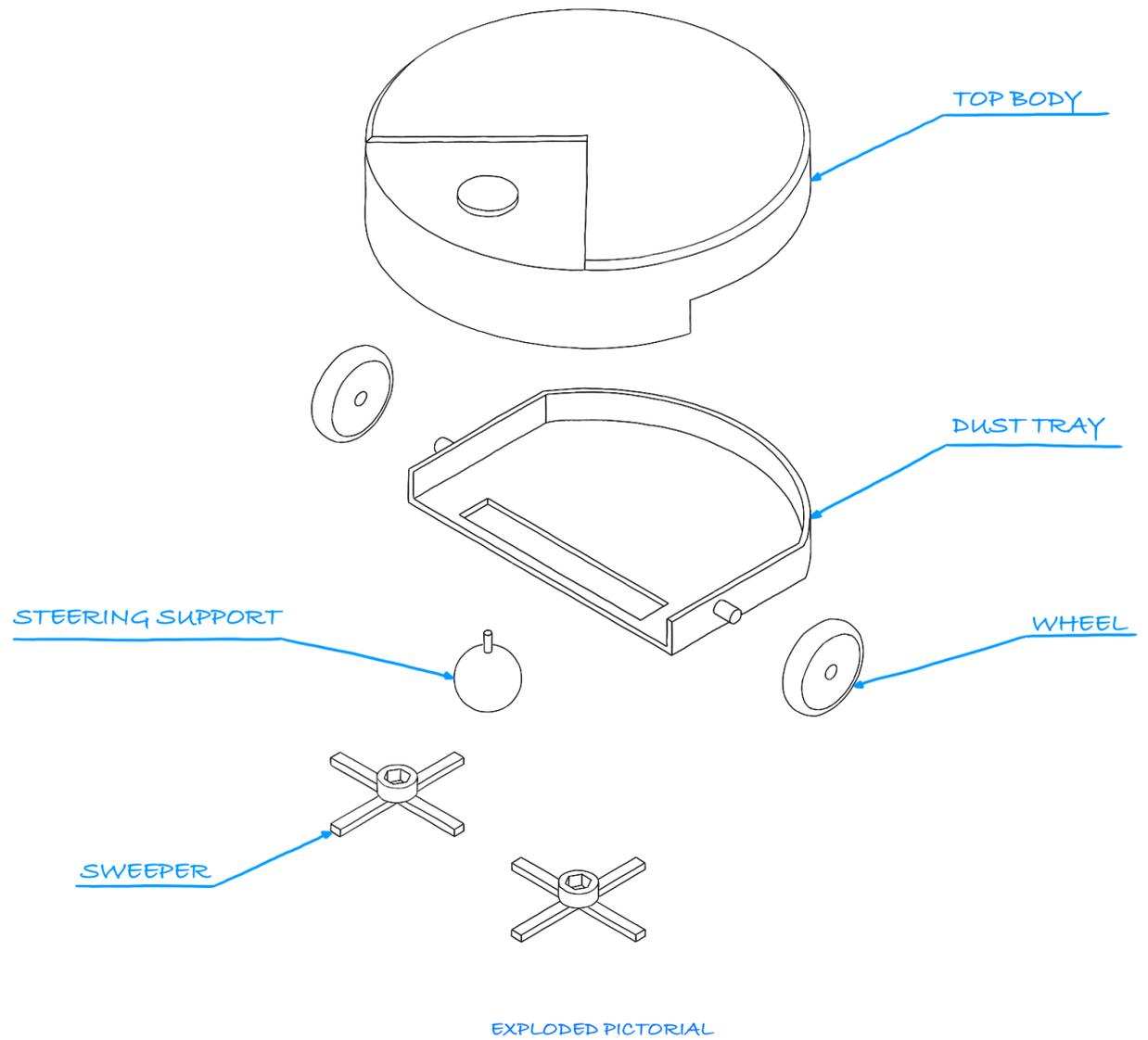


PICTORIAL VIEW SHOWING
TOP OF ASSEMBLY

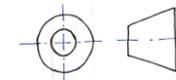
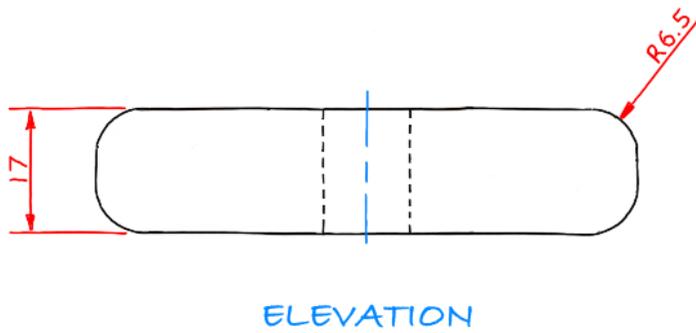
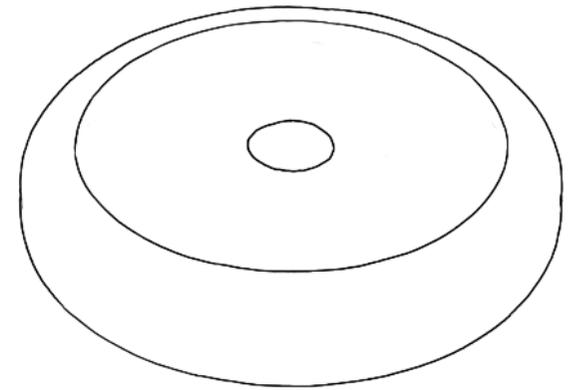
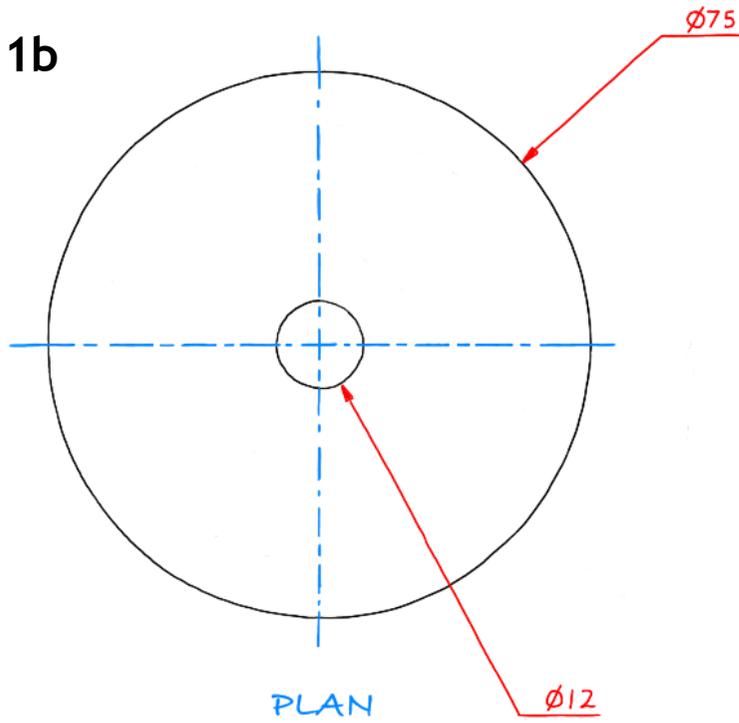


PICTORIAL VIEW SHOWING
UNDERSIDE OF ASSEMBLY

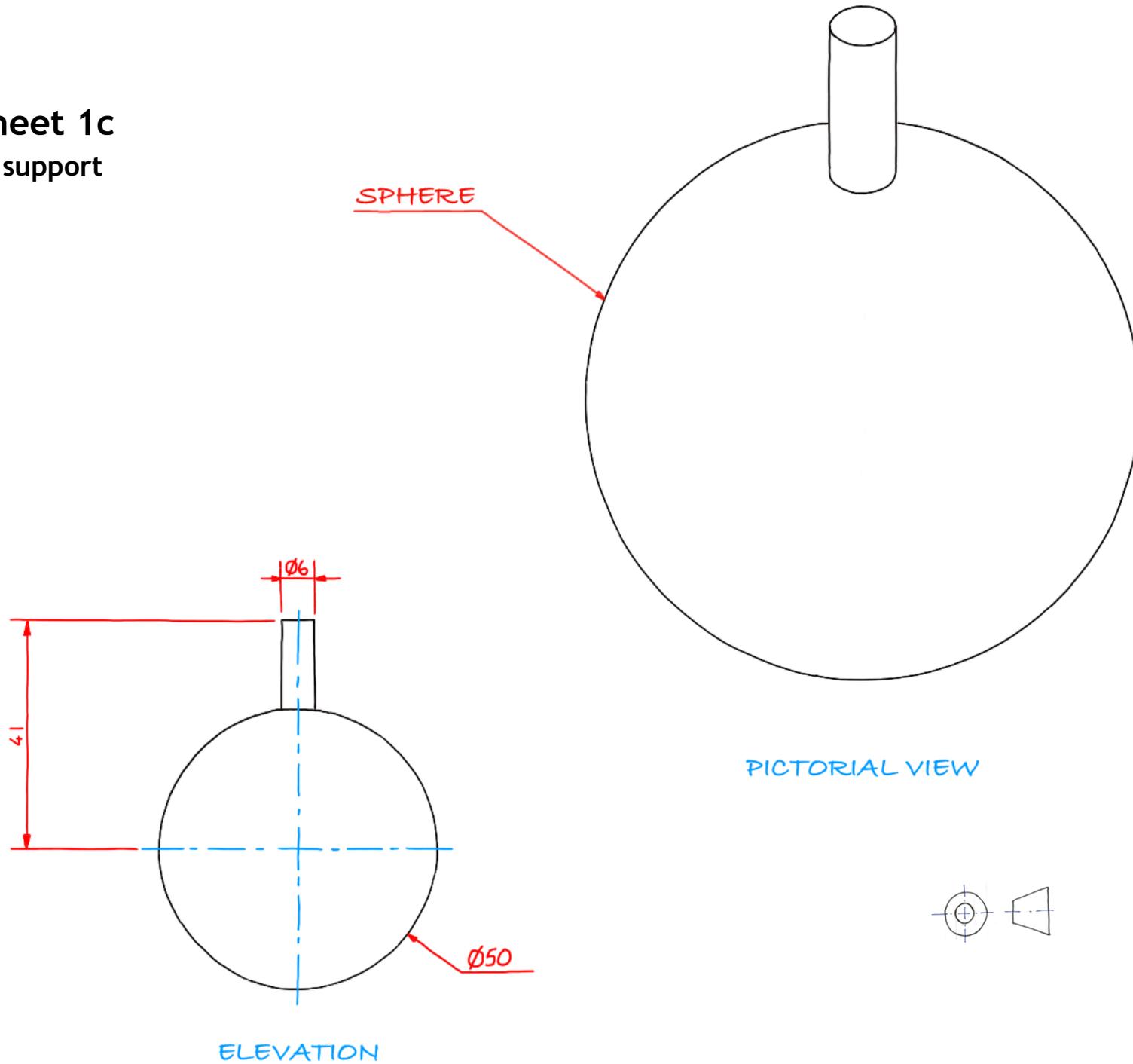
Elevation
Task 1b



Data sheet 1b
Wheel

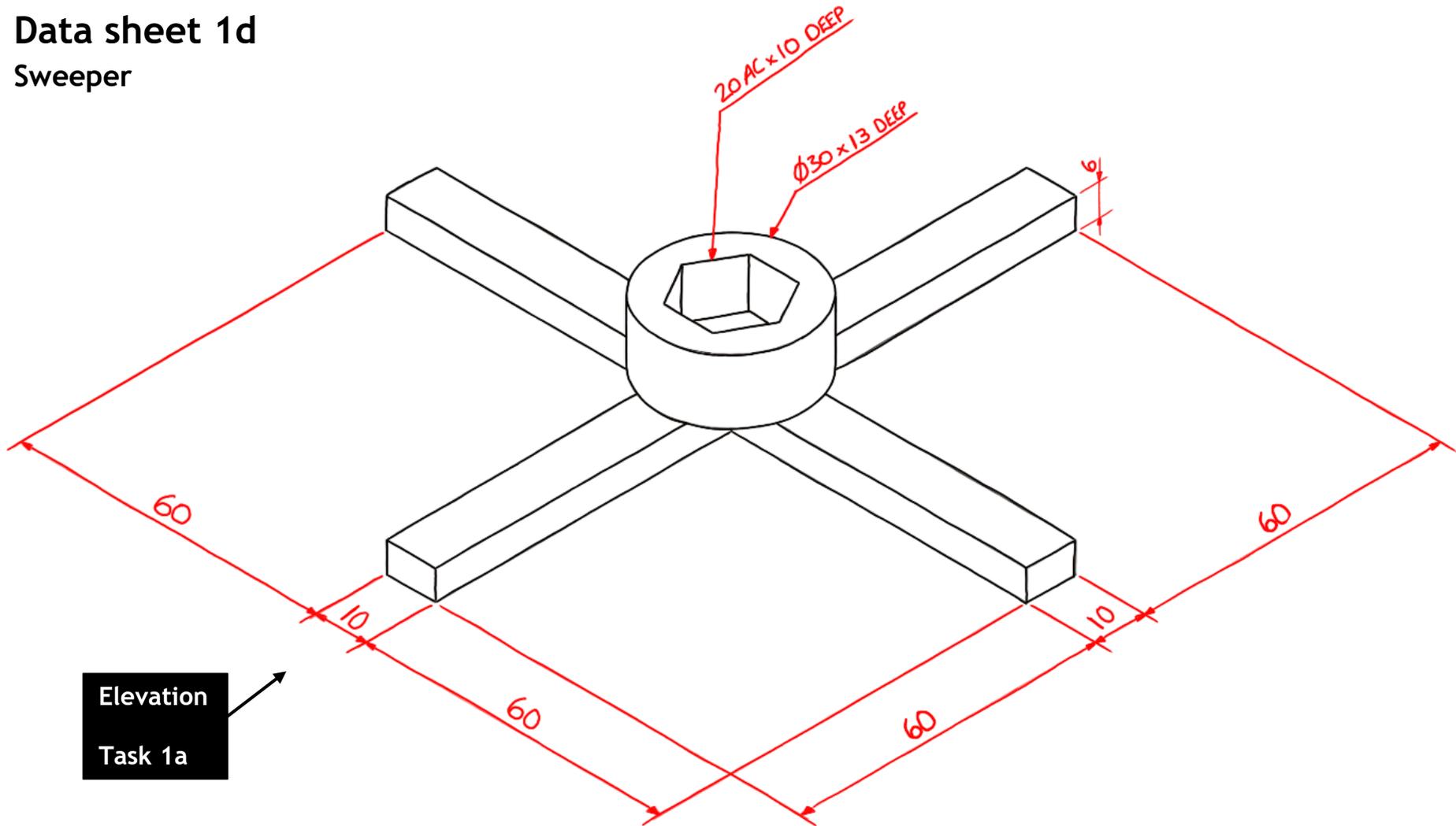


Data sheet 1c
Steering support



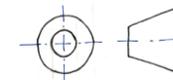
Data sheet 1d

Sweeper

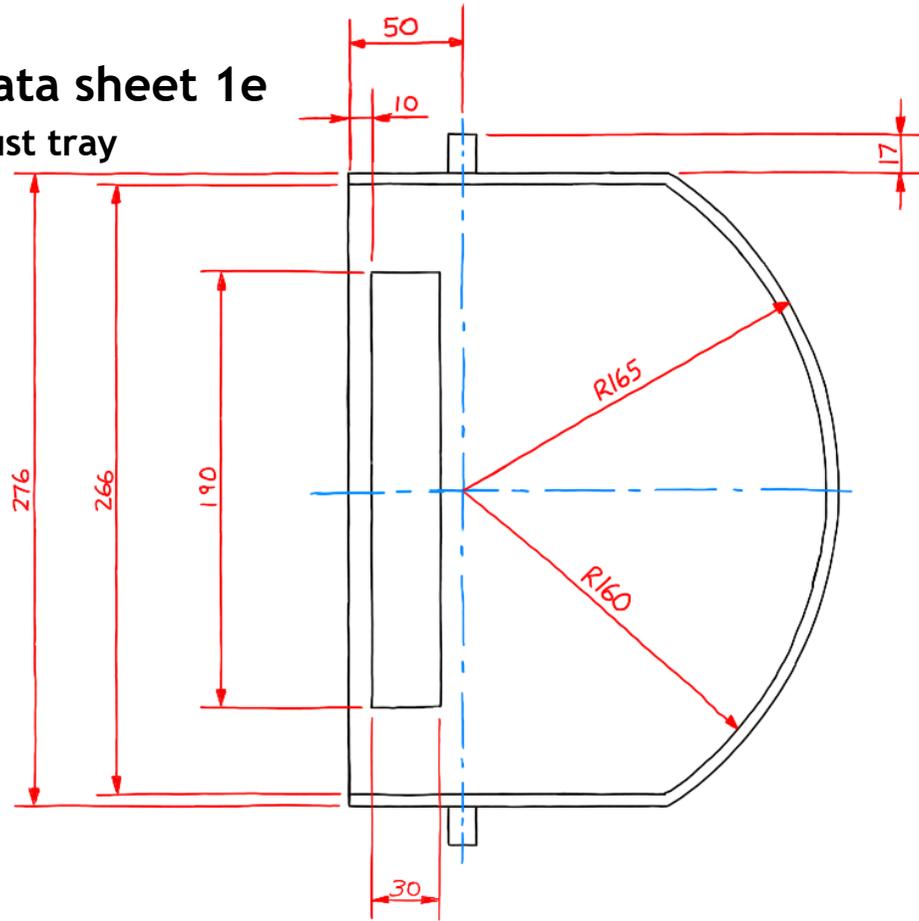


Elevation
Task 1a

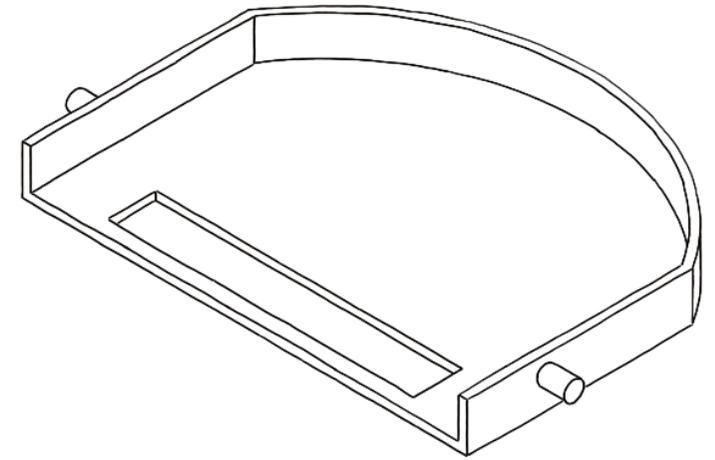
PICTORIAL VIEW



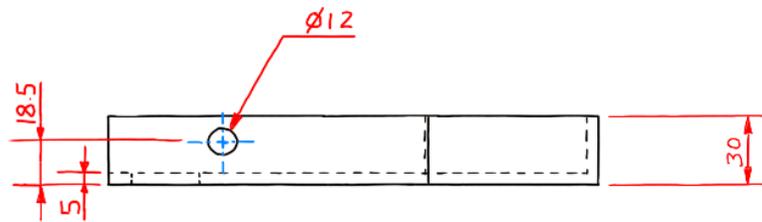
Data sheet 1e
Dust tray



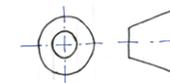
PLAN



PICTORIAL VIEW

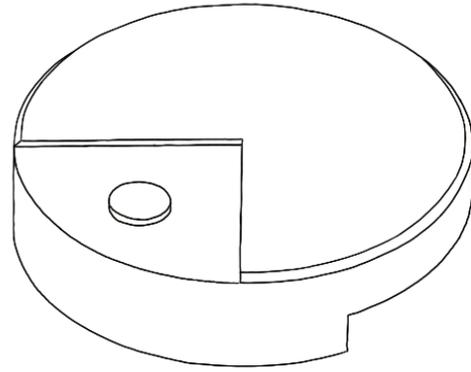


ELEVATION

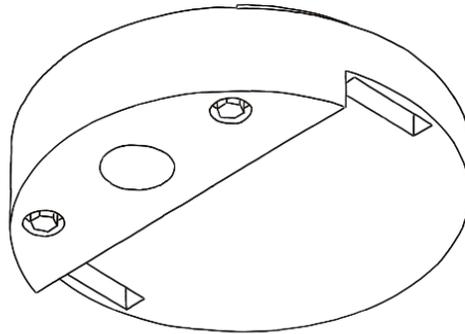


Data sheet 1f

Top body

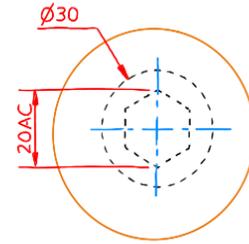


PICTORIAL VIEW SHOWING TOP OF THE BODY

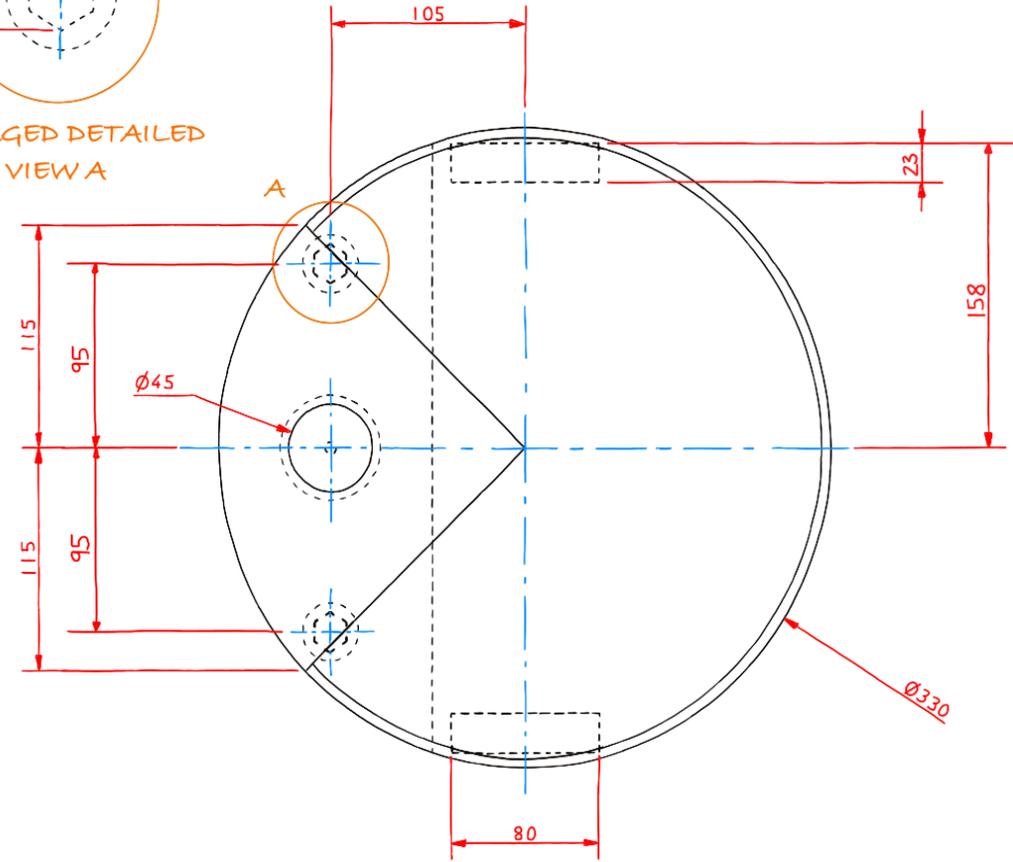


PICTORIAL VIEW SHOWING BASE OF THE BODY

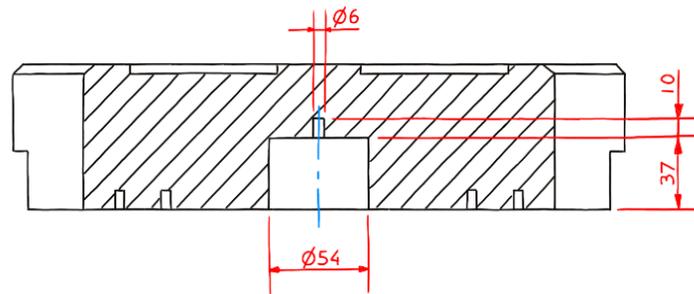
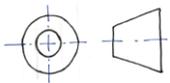
LINES REMOVED FOR CLARITY



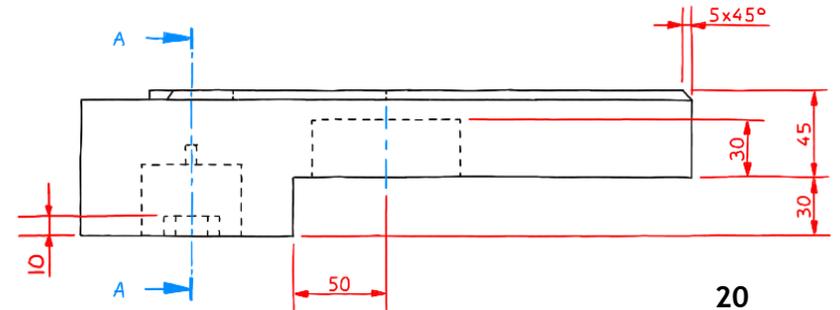
ENLARGED DETAILED VIEW A



PLAN



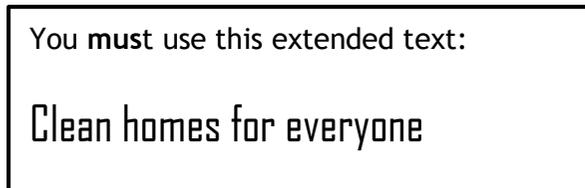
SECTIONAL END ELEVATION A-A



ELEVATION

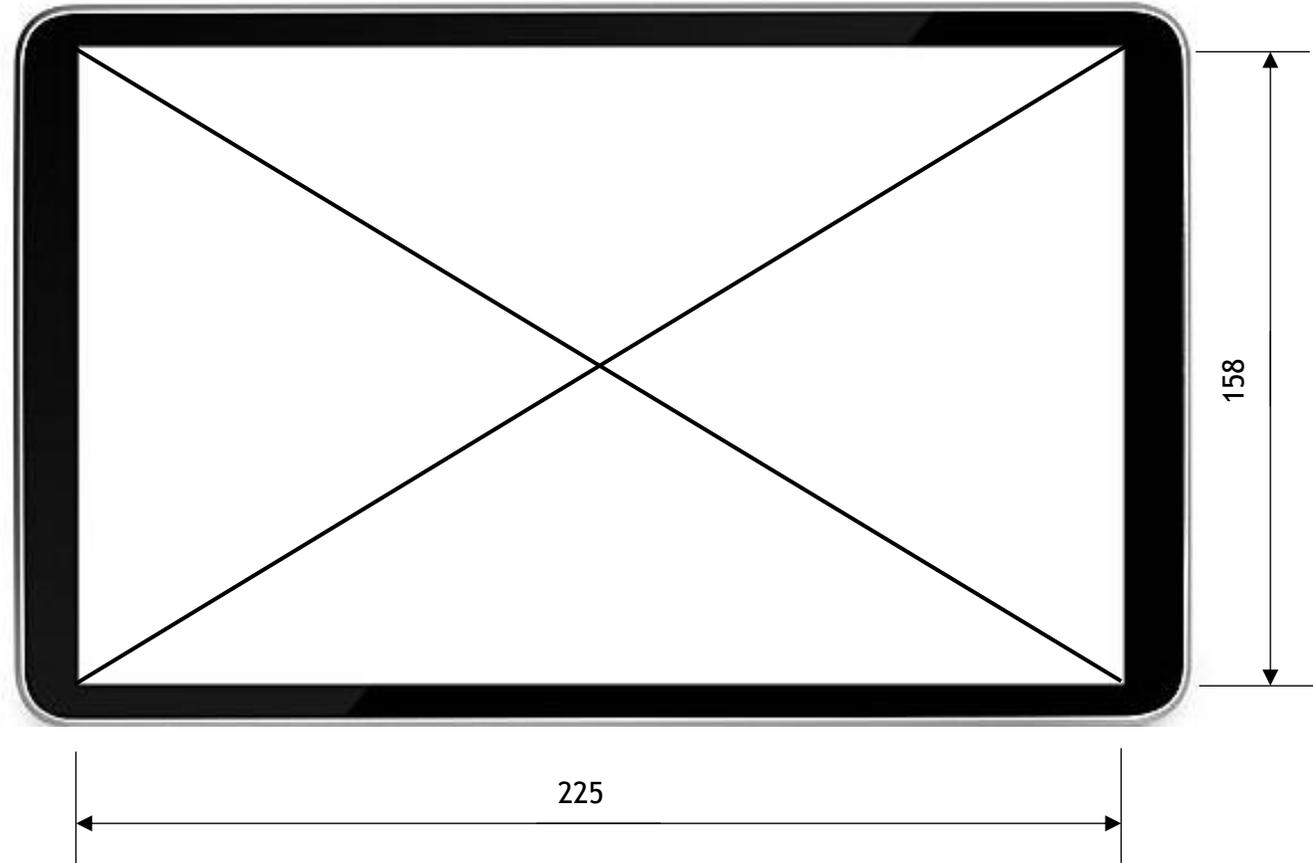
Data sheet 2a

The promotional graphic is to be produced for a tablet to the dimensions 225mm x 158mm.
The graphic layout is to be produced in landscape orientation, as shown in the example below.



The font style used in the company logo is Agency FB.

You do not have to use this font style in your DTP layout.



Data sheet 2b

Image 1

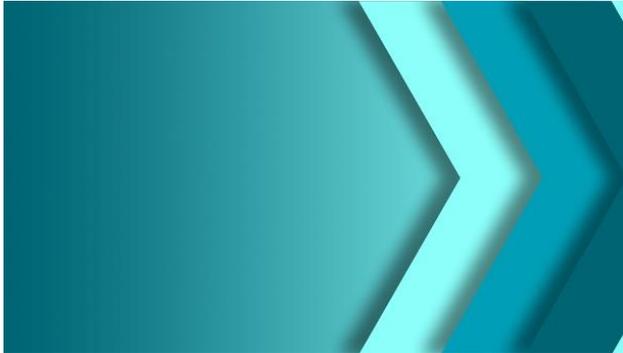


Image 2



Image 3

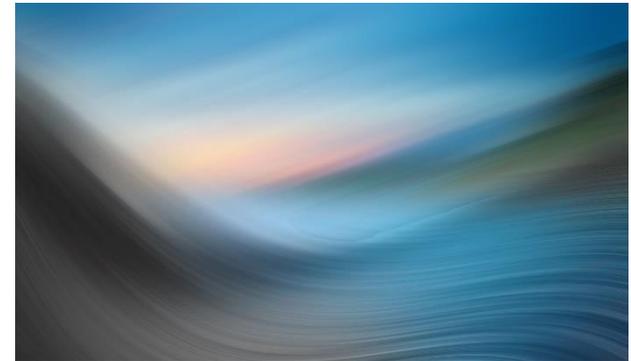


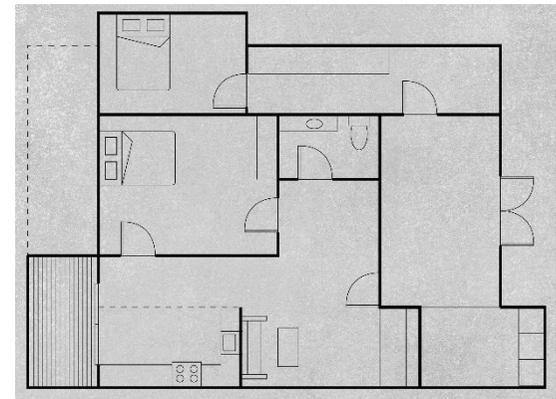
Image 4



Image 5



Image 6



Data sheet 2c

Image 7



Image 8



Image 9

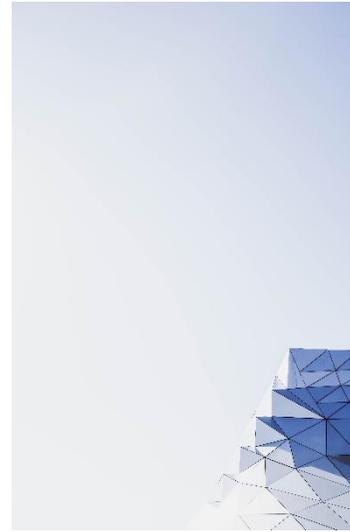


Image 10



Image 11

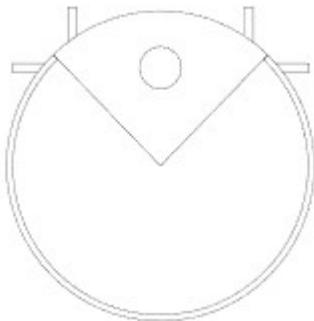
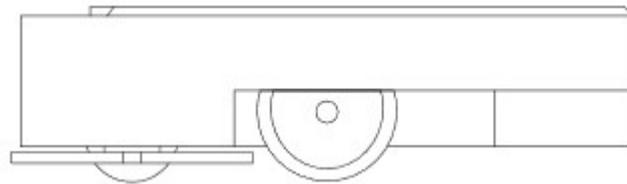


Image 12

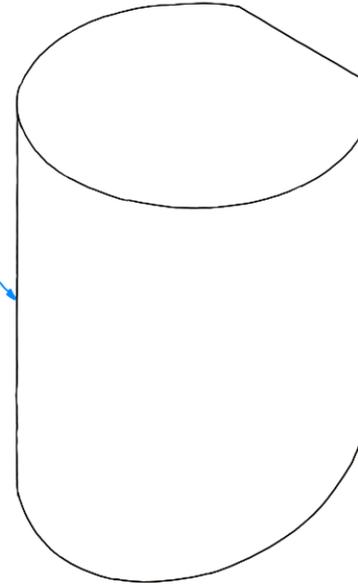


Data sheet 3a

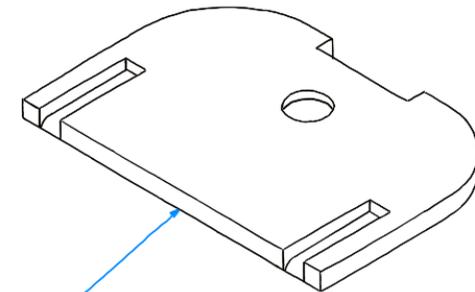
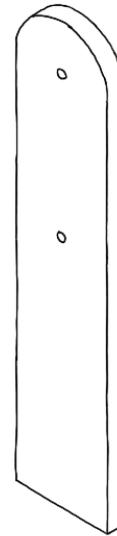
Rendered views of charging station with robotic vacuum and exploded view



POWER SUPPLY



STEM



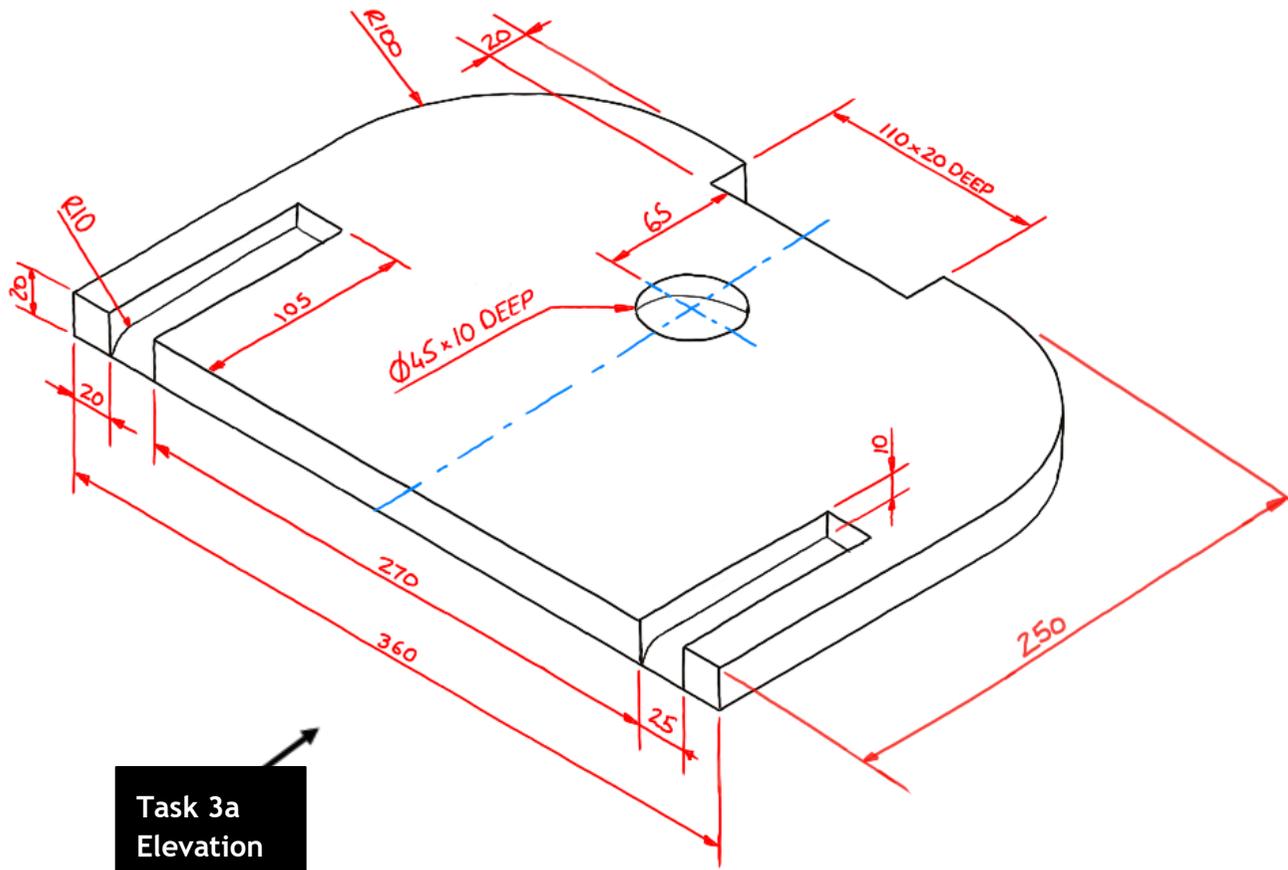
BASE

Task 3b
Elevation

EXPLODED PICTORIAL

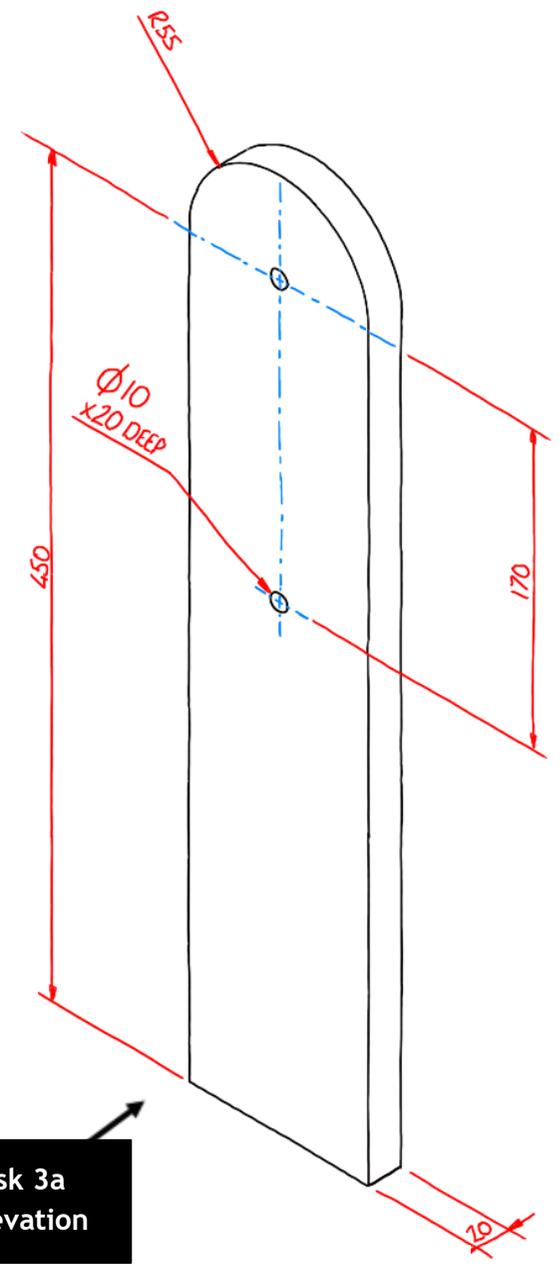
Data sheet 3b

Base and stem



Task 3a
Elevation

PICTORIAL VIEW

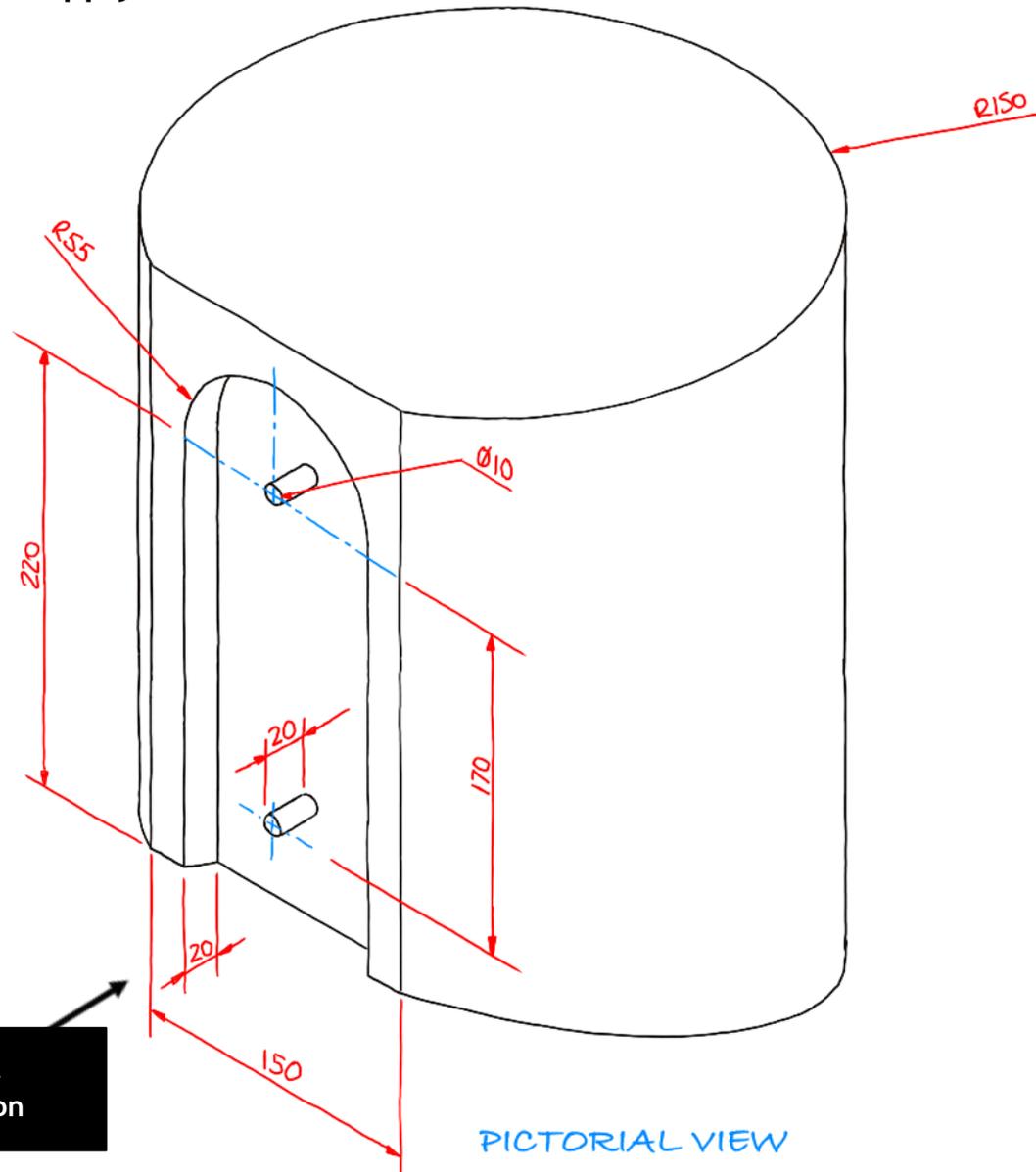


Task 3a
Elevation

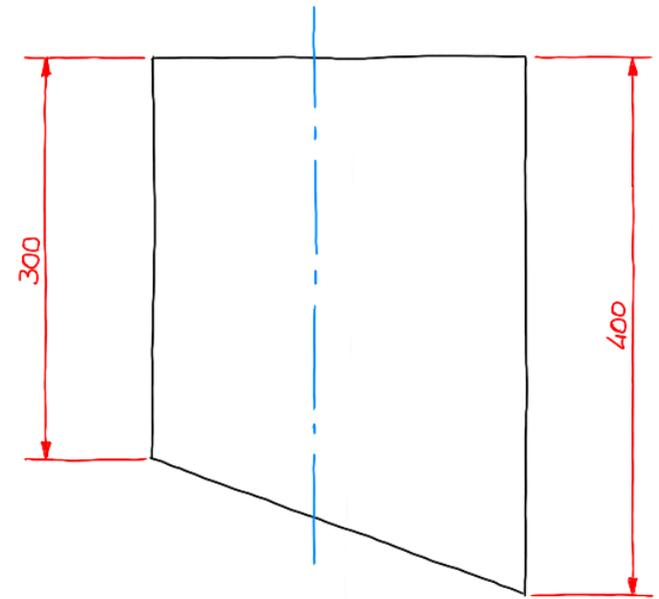
PICTORIAL VIEW

Data sheet 3c

Power supply



PICTORIAL VIEW



END ELEVATION

NOTE: HIDDEN DETAIL REMOVED FROM END ELEVATION FOR CLARITY

Task 3a
Elevation

Copyright acknowledgements

Assignment

Data Sheet 2b and c - All images are taken from Pexels and Pixabay - Creative Commons Zero Licence

Electronic files

All images are taken from Pexels and Pixabay - Creative Commons Zero Licence

Administrative information

Published: October 2023 (version 1.0)

History of changes

Version	Description of change	Date

Security and confidentiality

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