

# **The Nuts and Bolts: Drawing Plans**

*in Sketch and Scale.*

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How many people feel like this when they are faced with completing a housing modification?

# You are unsure how to.....

1. Illustrate the existing layout.
2. Illustrate the proposed design solution.
3. Whether what you are proposing is even possible!

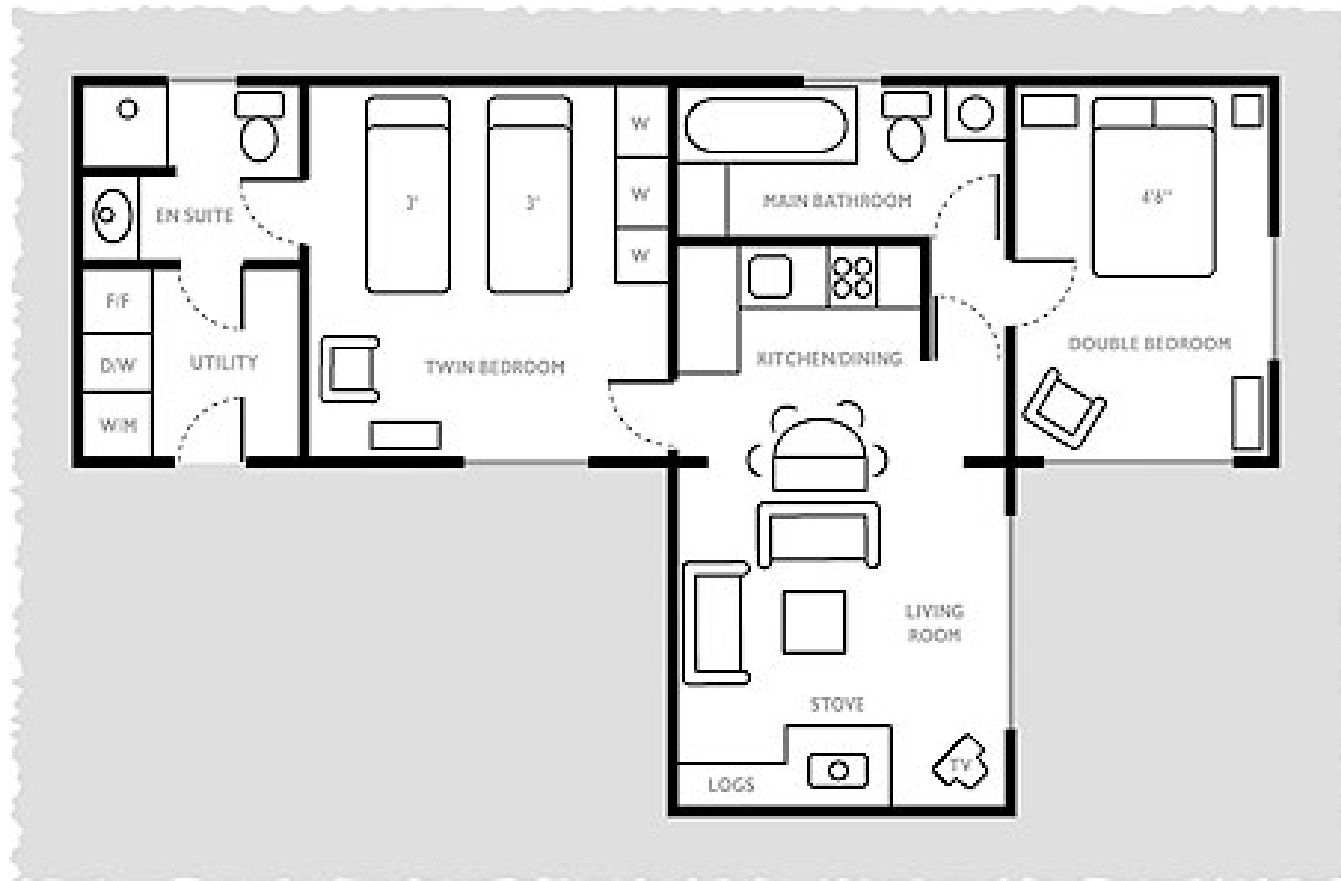


# How to turn what you see into an initial drawing:

Imagine you are looking directly down on the room – bird's eye view.

This view is known as the Plan View and is the most important drawing to illustrate the existing environment.

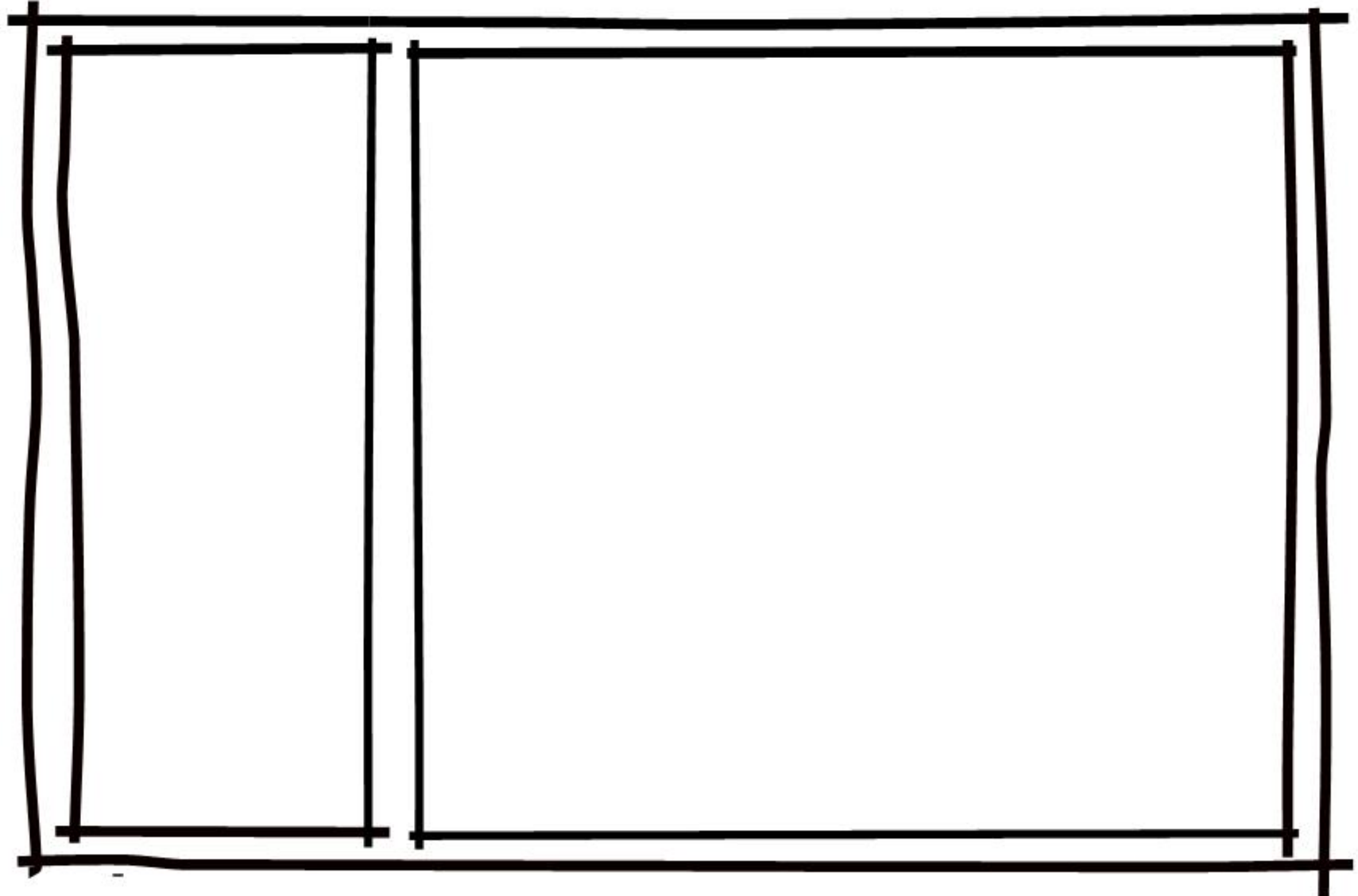
You can do this with a sketch – it does not need to be to scale.



An example of a Plan View drawing of a house.

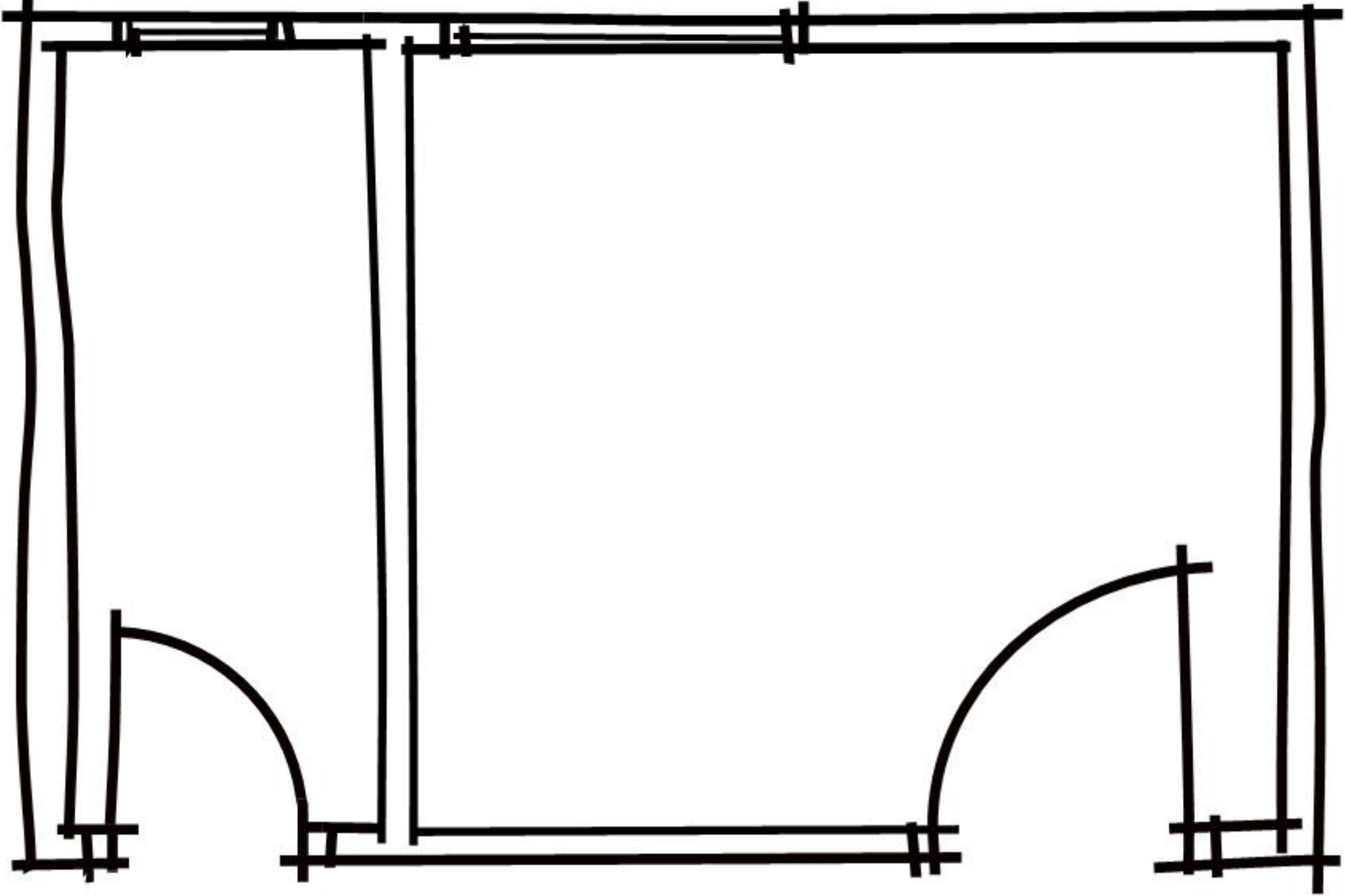
## **Drawing the Sketch Plan**

- Walls first. Draw in the external walls (outline) of the room.
  - Don't make the drawing too small. Use most of the sheet, but remember you need to put measurements onto the drawing so leave some space around the edges.
- Then the internal walls if there are any.



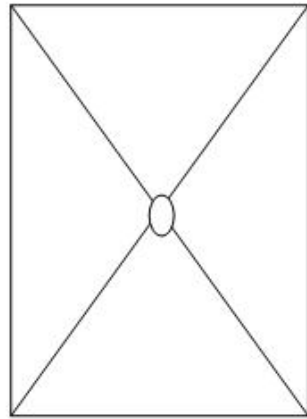


- Doors next, draw in the doors.
  - Note the type of door and whether it opens into the room or out of the room and what side it is hinged from.
  - Possible types of doors include – cavity slider, surface-mounted slider, or standard door.
- Then the windows, draw in the windows.
  - Note whether the window is static or is able to be opened.

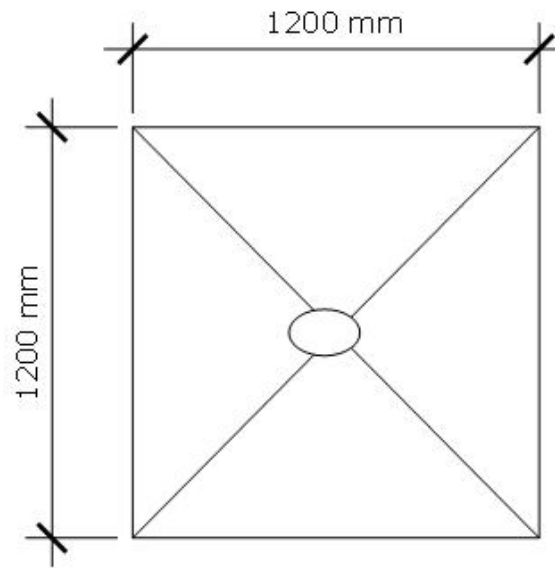


- The fittings and fixtures are drawn next. For example in a bathroom this would be the vanity, toilet, bath or/and shower unit.
  - It is helpful if you use a different colour pen when drawing the fitting and fixtures (but make sure that it will photocopy).
  - It is important to use the symbols illustrated to convey common fitting and fixtures. These symbols are universally recognised.
  - Remember to name the rooms illustrated in the plan drawing.

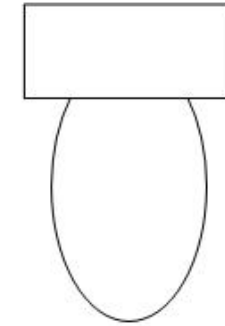
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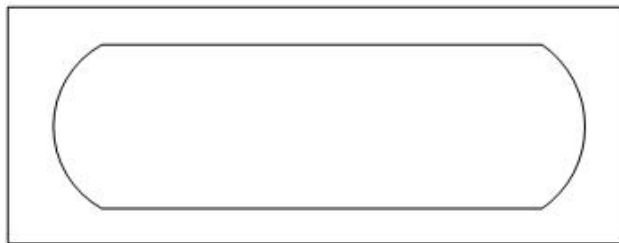
Shower



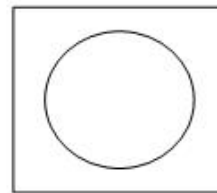
Wet Area Shower



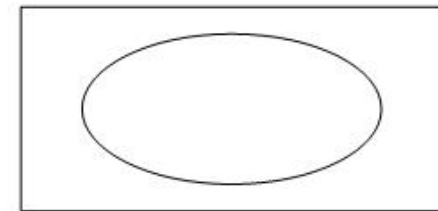
Toilet



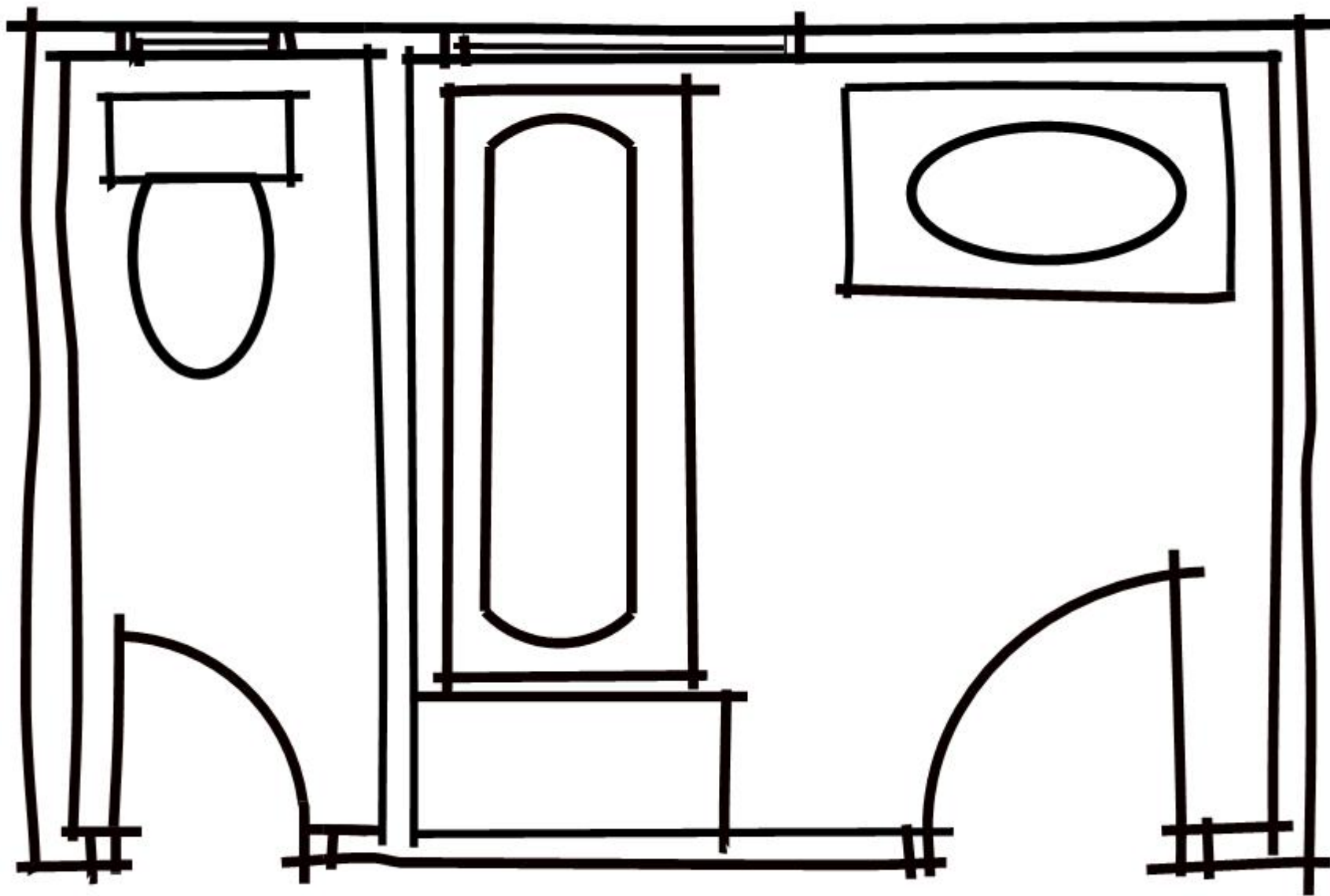
Bath



Hot Water Cylinder



Vanity



Okay. Now you have the plan drawn it is time to add the measurements to the drawing.

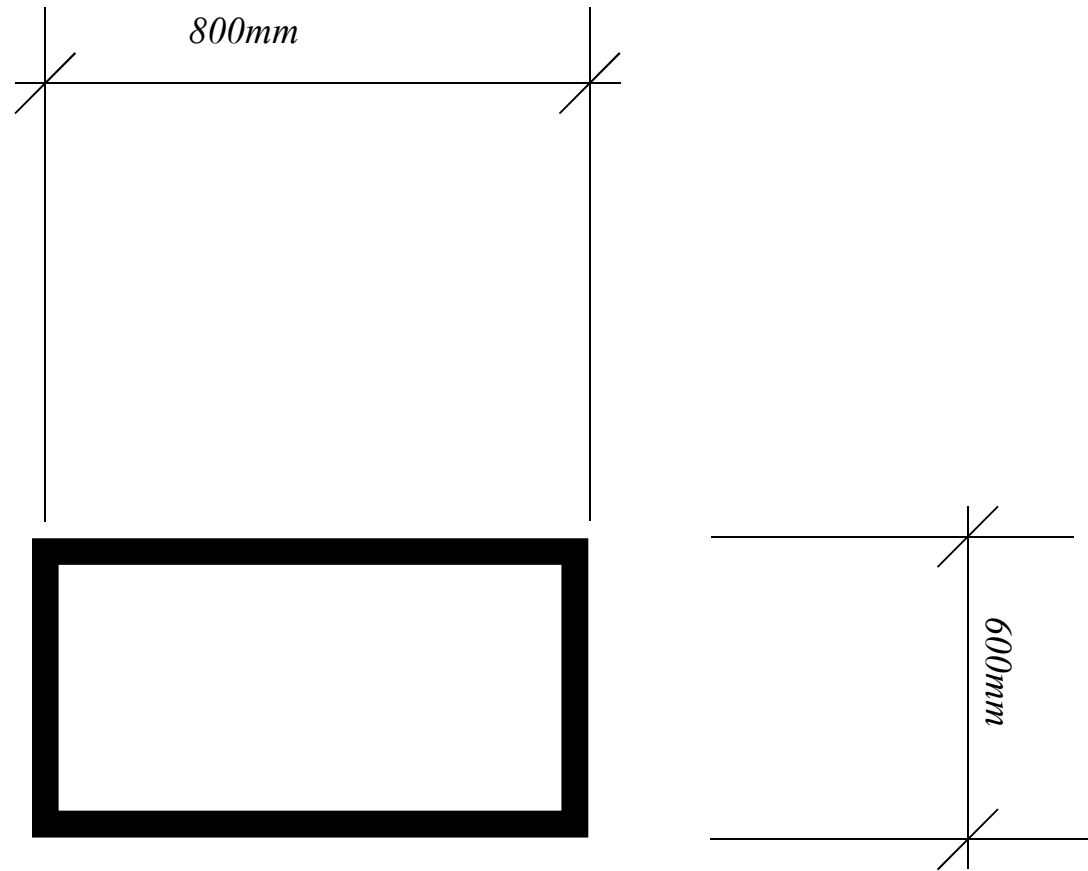


- Only put the **IMPORTANT** measurements on to the drawing.
  - Use another coloured pen or pencil that will photocopy well.
  - All measurements should be in millimeters.

**- KEEP THE MEASUREMENTS  
SIMPLE AND CLEAR -**

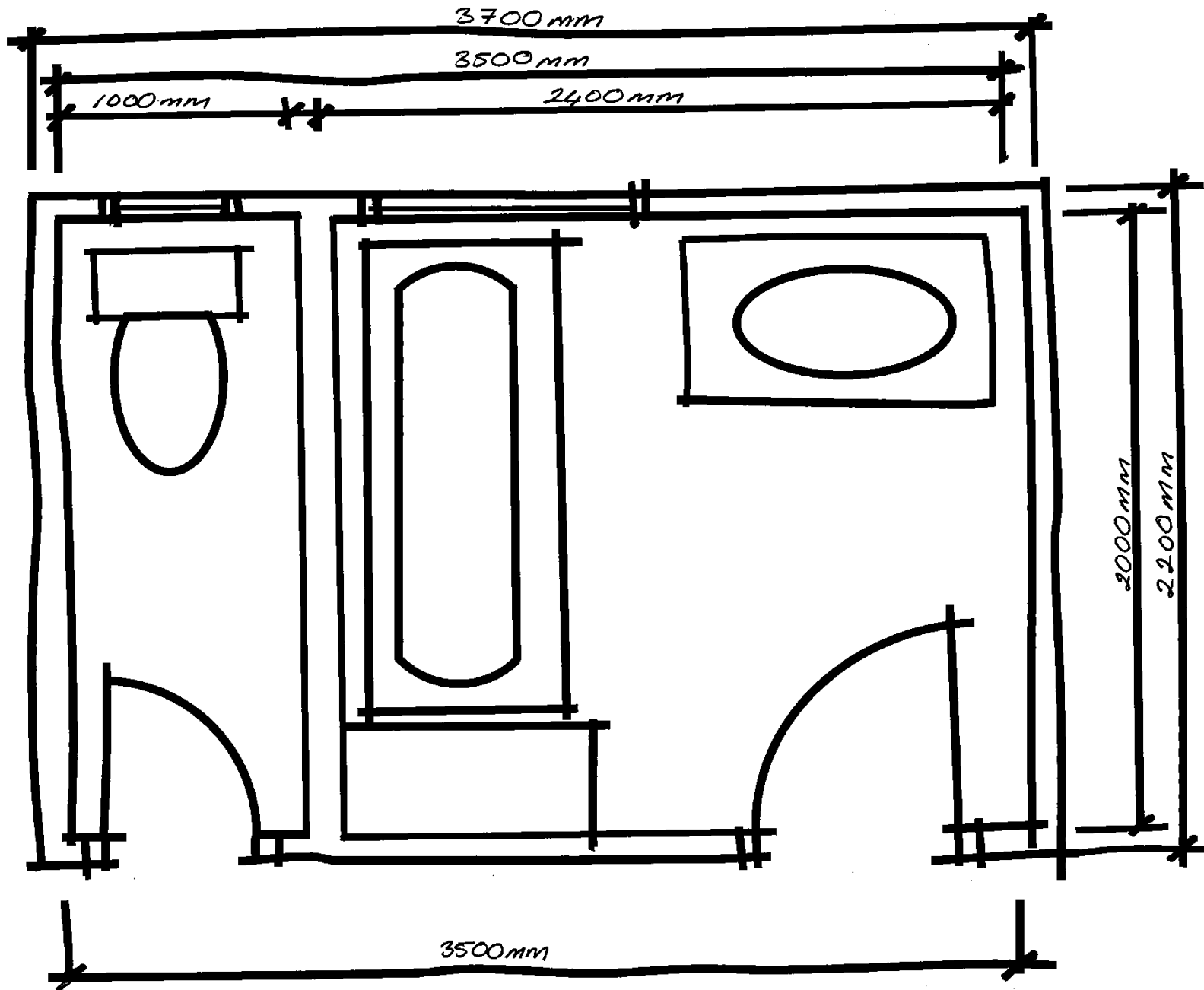


A measurement is put onto the drawing like this....

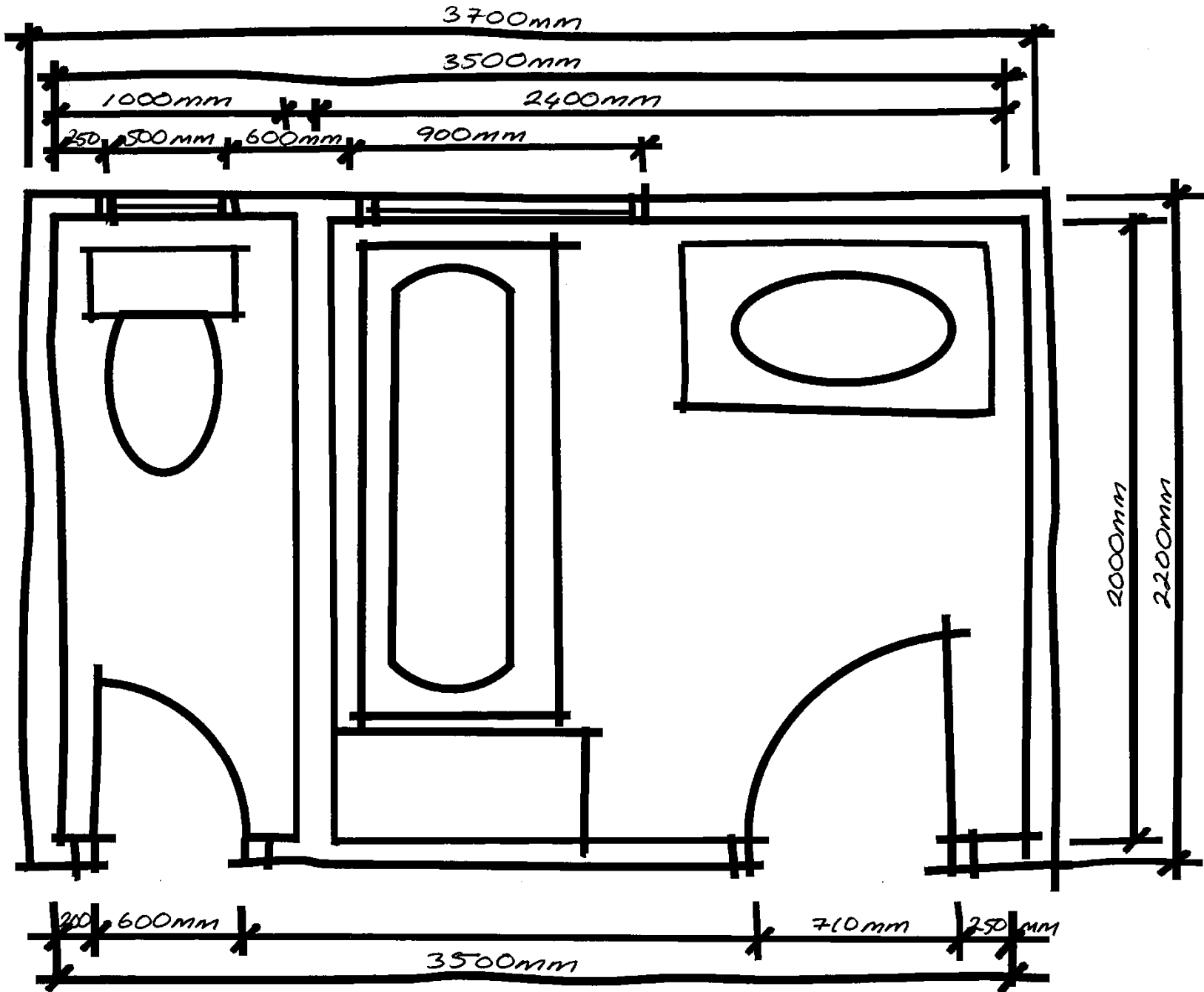




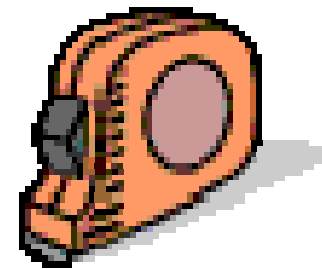
- The primary measurements include;
  - The overall length of each wall (measure the wall within the room space).
  
  - If removing a wall, measure the total length of the hallway side, and then each room separately (allowing for wall thickness which is generally between 100 – 150mm).

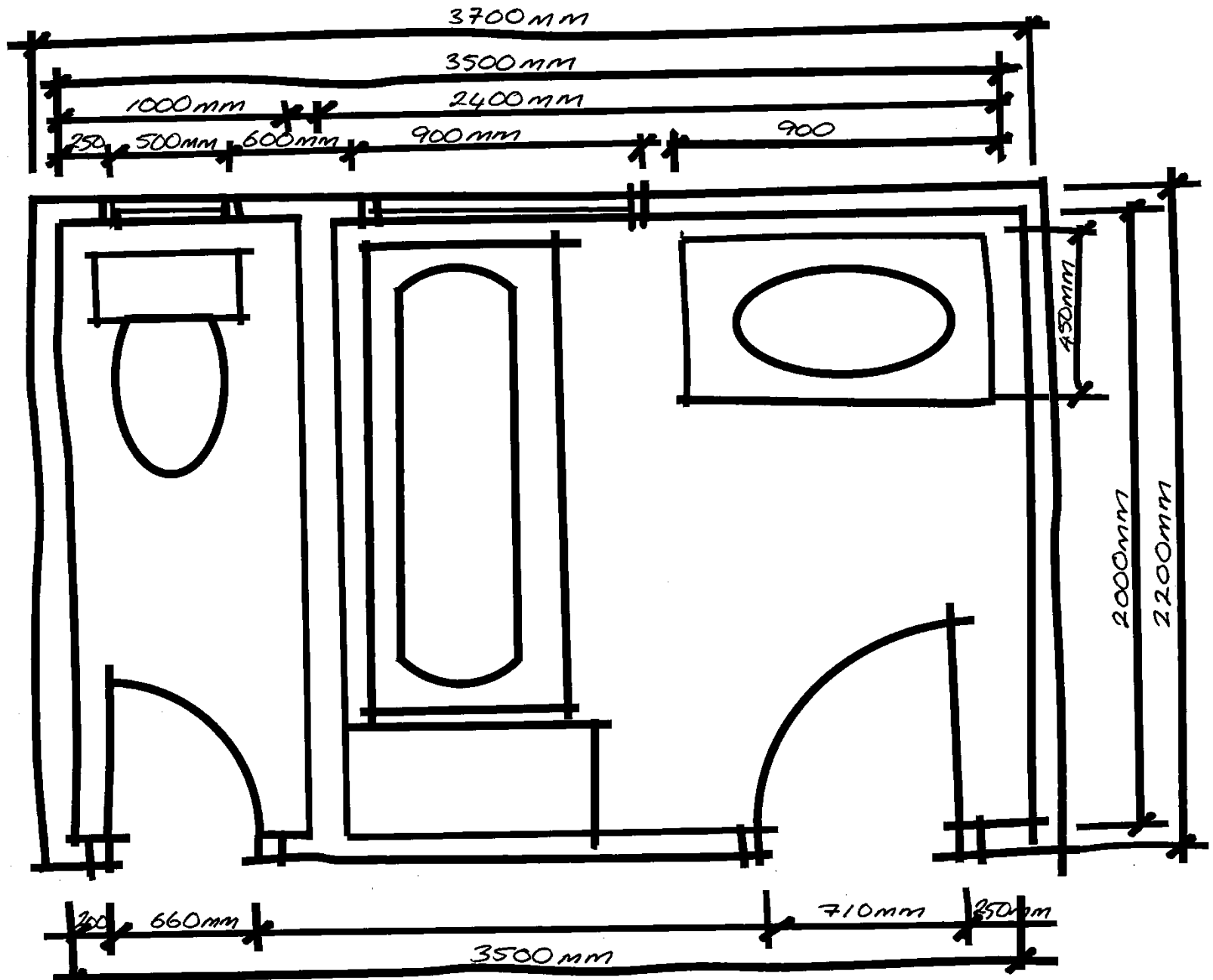


- Next put the measurements of the door/s on the plan.
  1. When measuring doors, measure from one side of the door frame to the other side of the door frame. Note this measurement.
  2. Then deduct actual solid door thickness as this will narrow the opening space. Note this measurement also  
This measurement is important for clear width when a person uses a wheelchair, or frame.
    - Try and reference the measurements that locate the doors and windows from one common point (this may be a main wall).



- Next locate the vanity, toilet, and/or shower from one common point if possible (again a main wall).
  - When measuring the toilet and a pedestal basin measure from the wall to the centre of each item.





- Now add important notes.
  - Put these on the drawing but away from the main drawing, so your plan does not become unnecessarily cluttered.
  - Use arrows to tie this information to the drawing.
  - Take note of any of the following....
    - floor materials,
    - whether or not there is safety glass in the windows.
    - window and door heights.

- toilet, and basin heights.
- ceiling height especially if the ceiling is sloping.
- hand rails and towel rails currently in place.
- the location of heaters, fans, light switches, power points and the hot water cylinder.
- mirrors



- You have successfully completed a sketch plan of the existing environment.
- You will need to do a sketch plan of the proposed modification as well. So make sure you have made thorough notes and have included all the relevant measurements needed.
- Remember to take some photos. They can be very helpful to show the existing environment to support the sketch plan (and to fill in any information you may have forgotten to put on the sketch plan).



How to draw up a scale version  
of your sketch plan

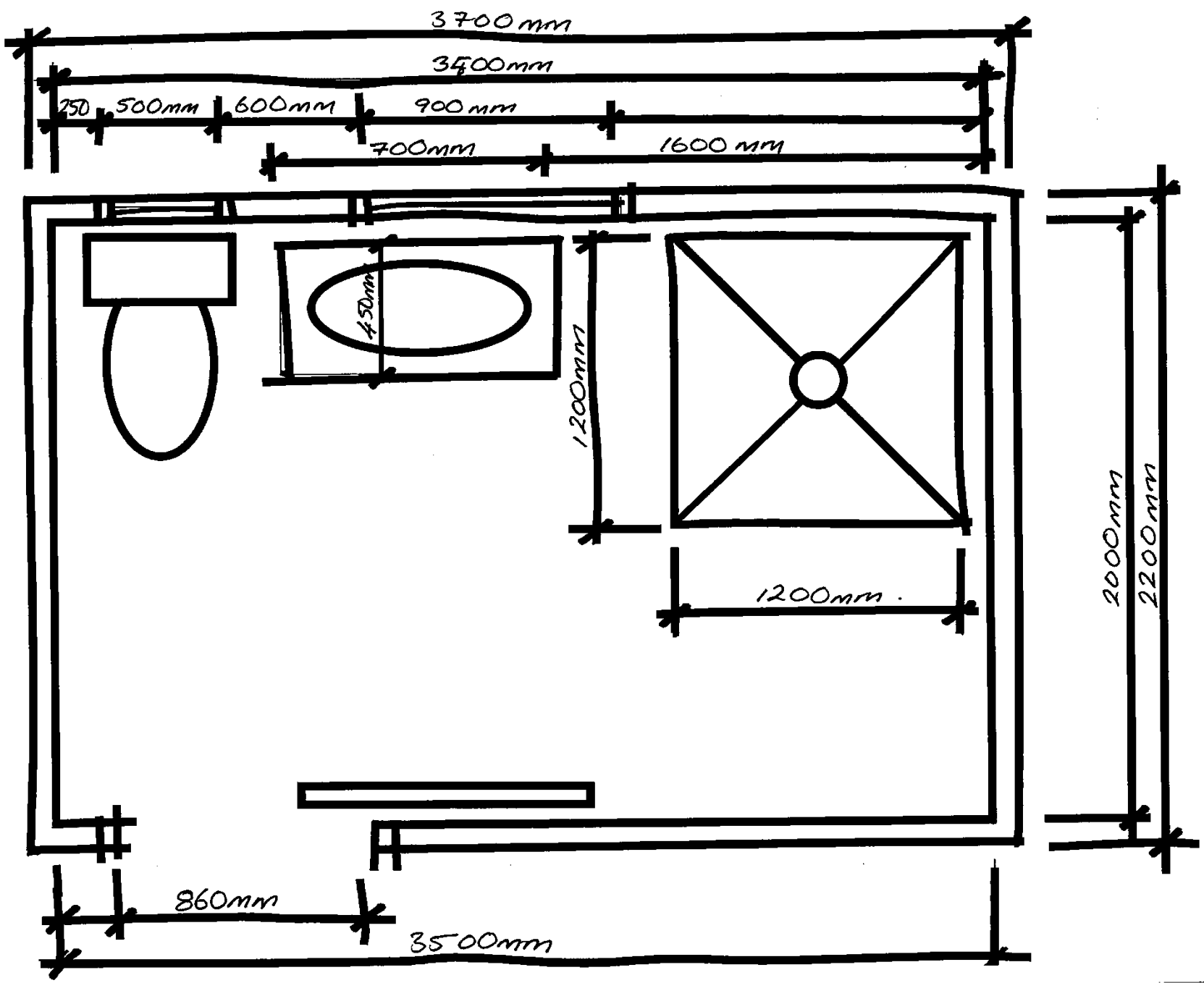
– using the same process as  
you did earlier.

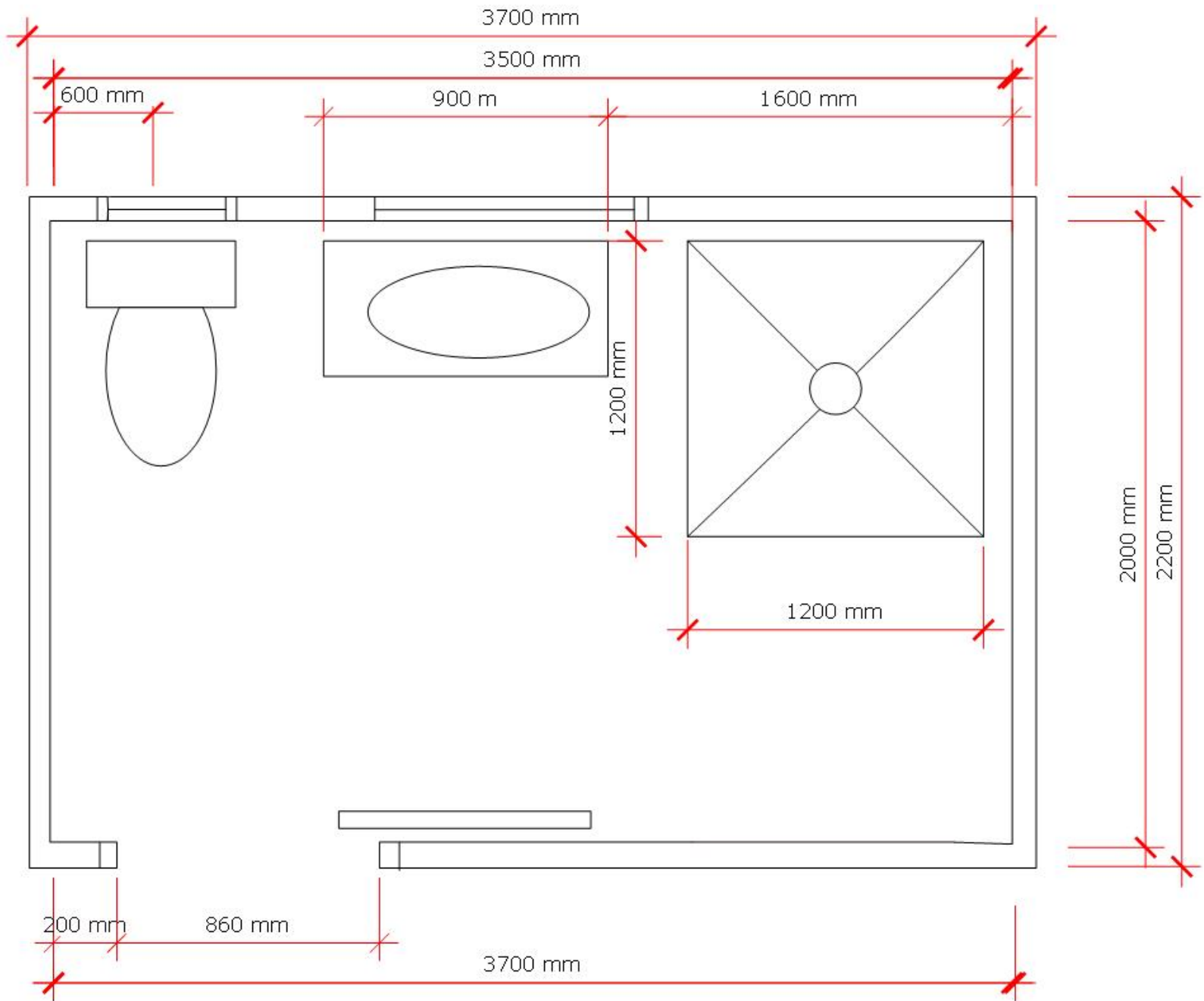
- If you have access to a scale rule use this, otherwise use grid paper.
- The other option is to generate the drawings on the computer.

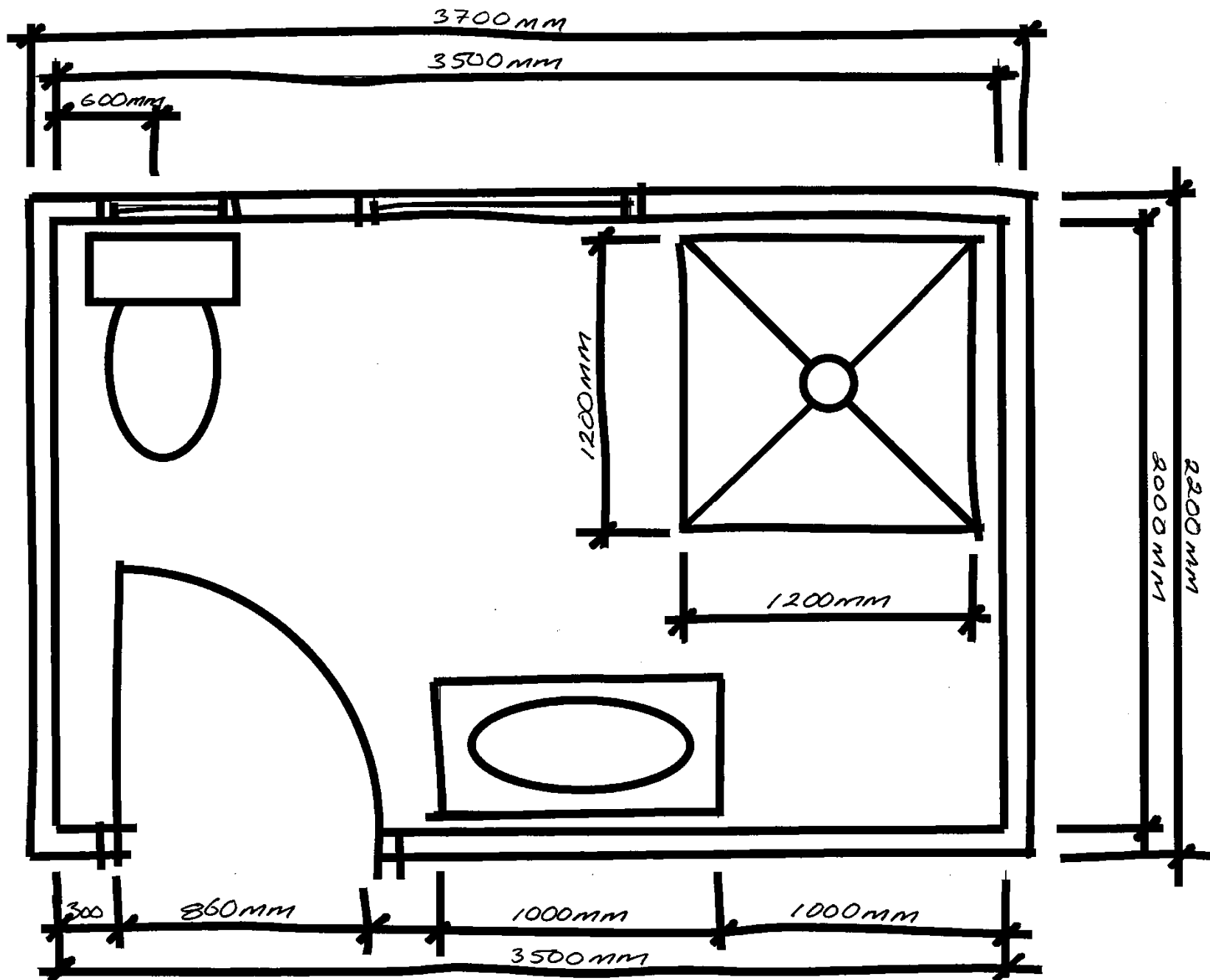


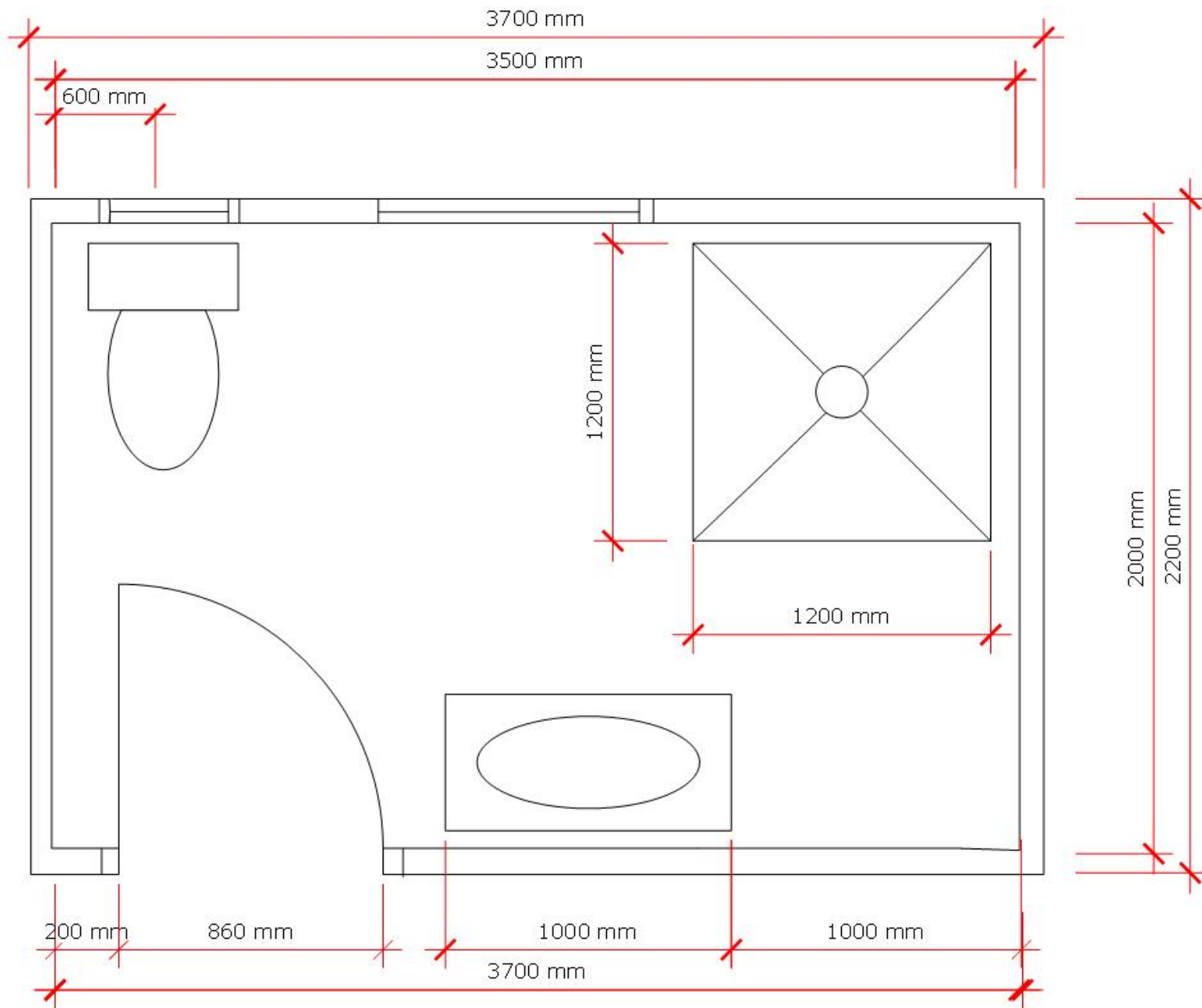
- Take multiple photocopies of the scale drawing.
- Include on the original scale drawing anything that is to remain post modification.
- Now try out different solutions.
- And check the following (as necessary)....
  - access into and from the bathroom (i.e. door width, type of door proposed – hinged door, an external sliding door, or a cavity sliding door).
  - turning circles for a wheelchair, or other equipment
  - transfers onto and from the toilet,
  - size of wet area.

The following drawings illustrate two possible solutions for the proposed bathroom modification.



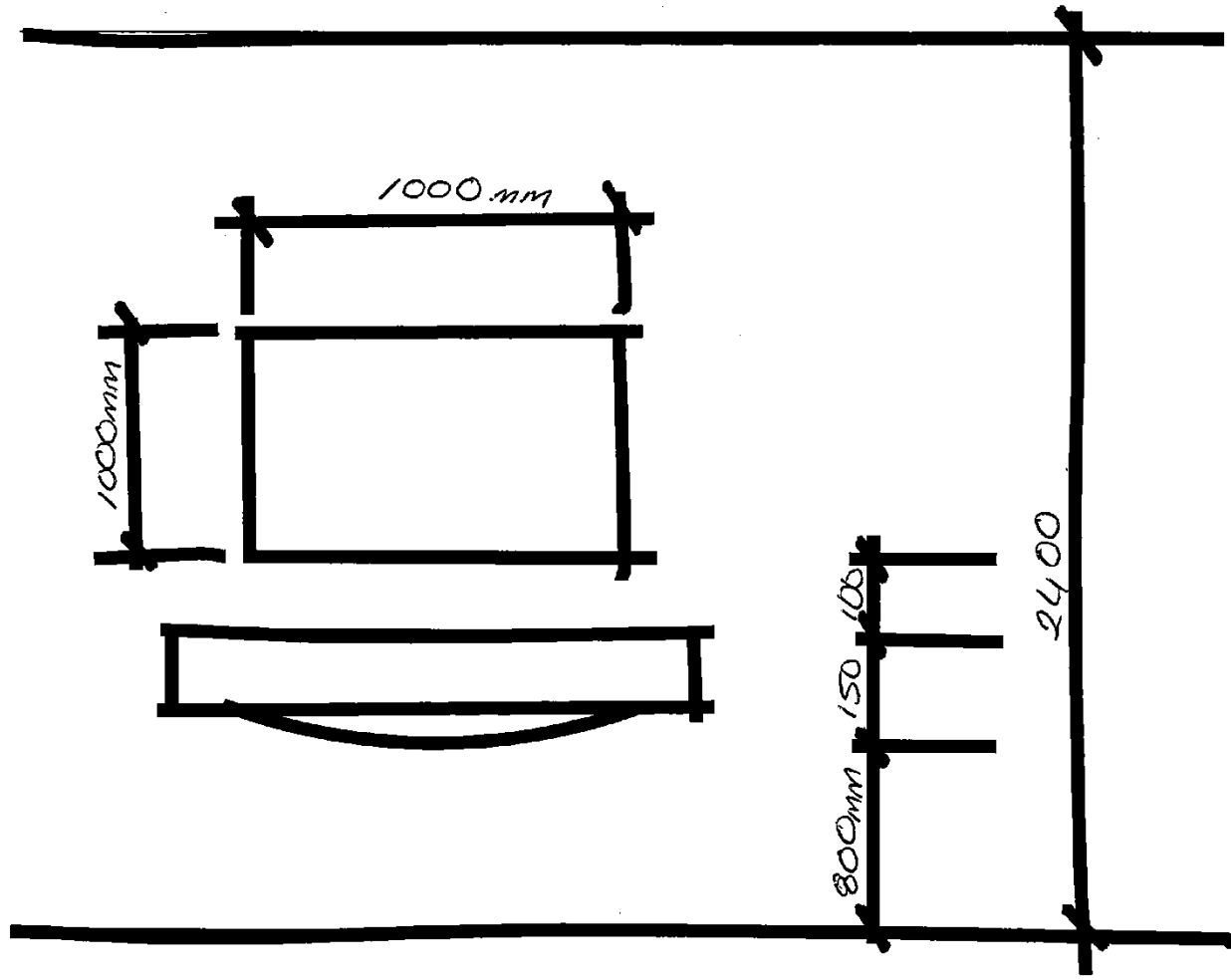


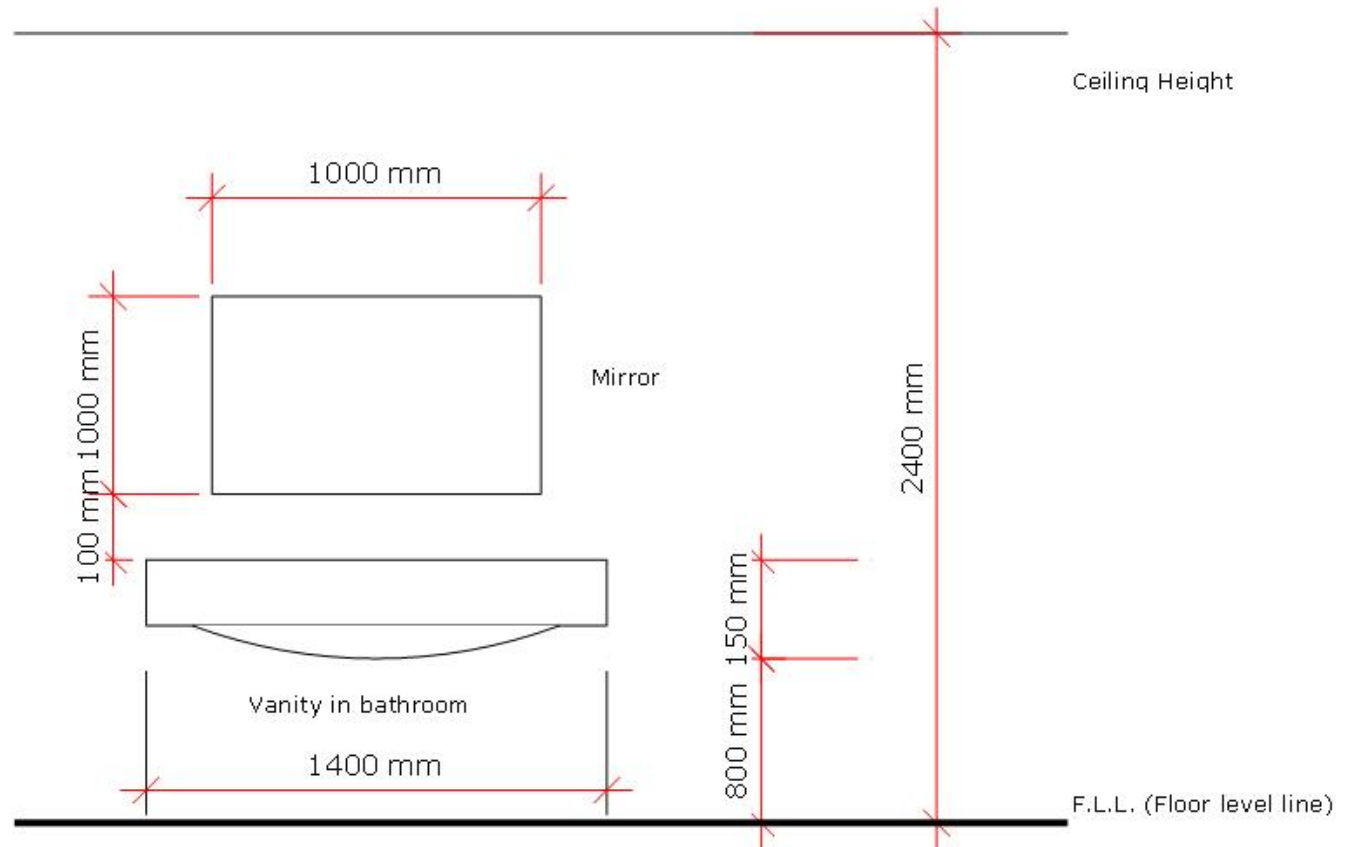




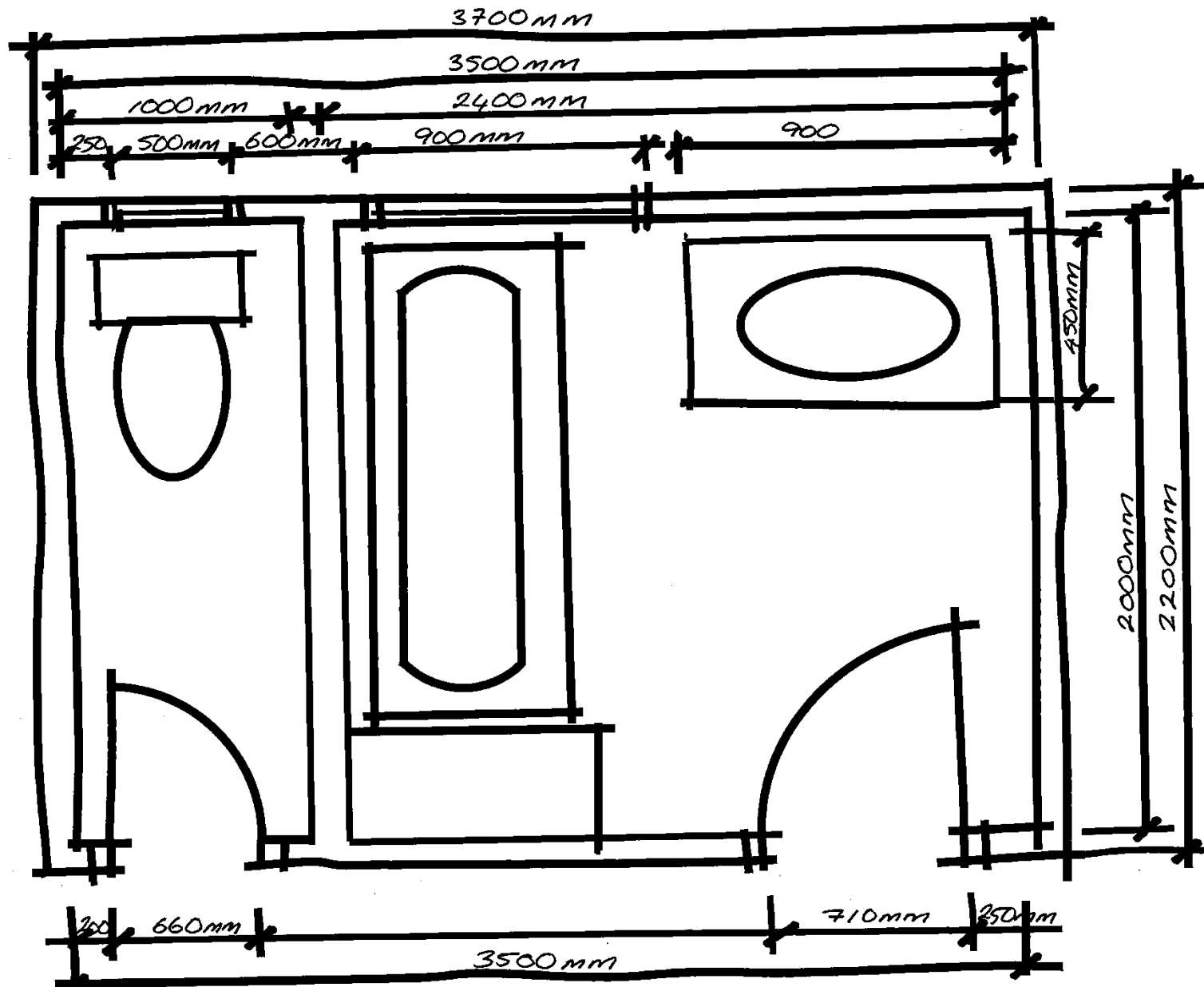


- You may need to include another view known as an Elevation drawing or Front View. This view is the view you get when you look straight at a wall. Like the Plan View this is 2 dimensional.
  
- Use this to show the height you want handrails located at, or the height the vanity is to be hang at.
  - Ground level Line – G.L.L.
  - Floor Level Line – F.L.L.

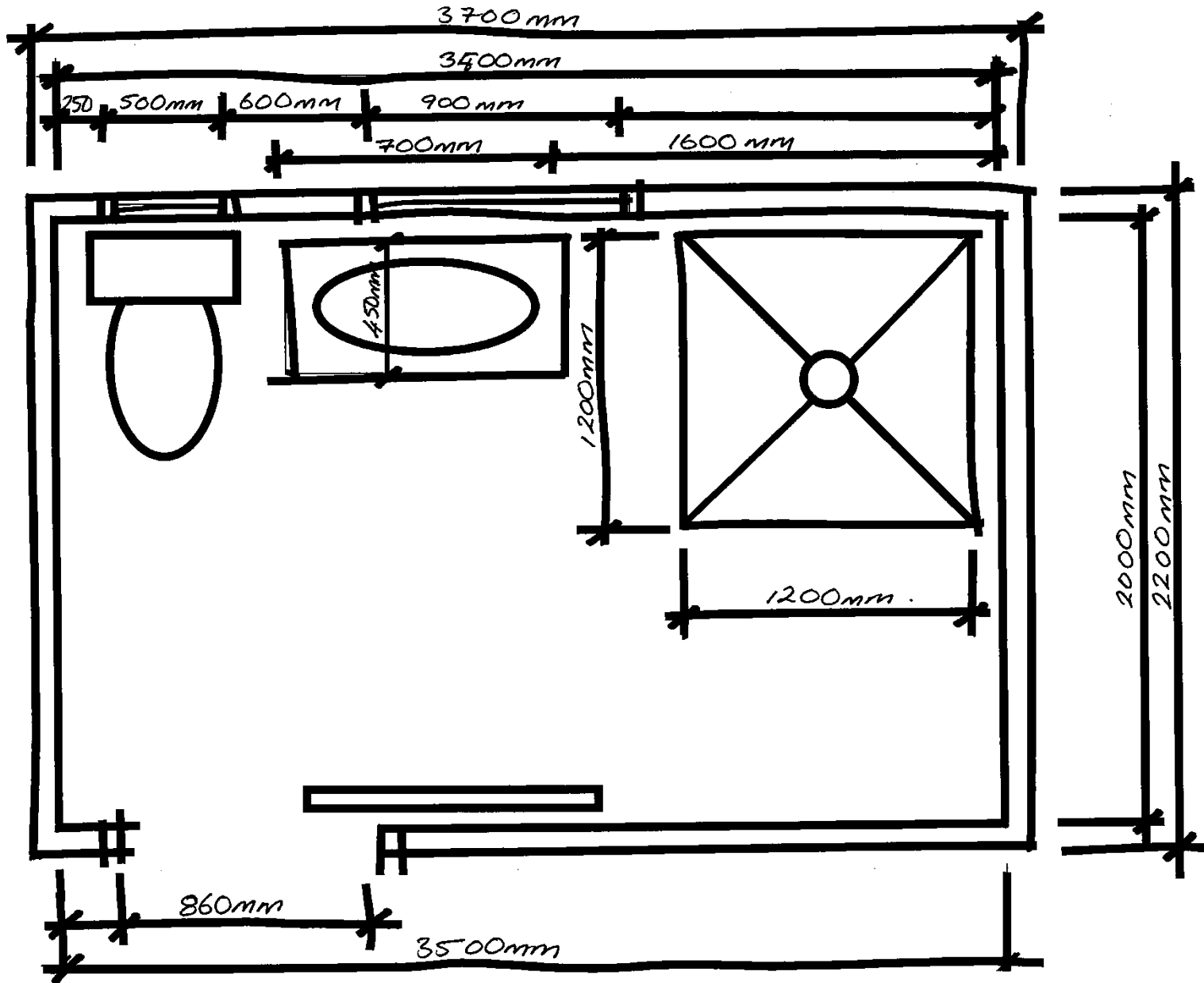




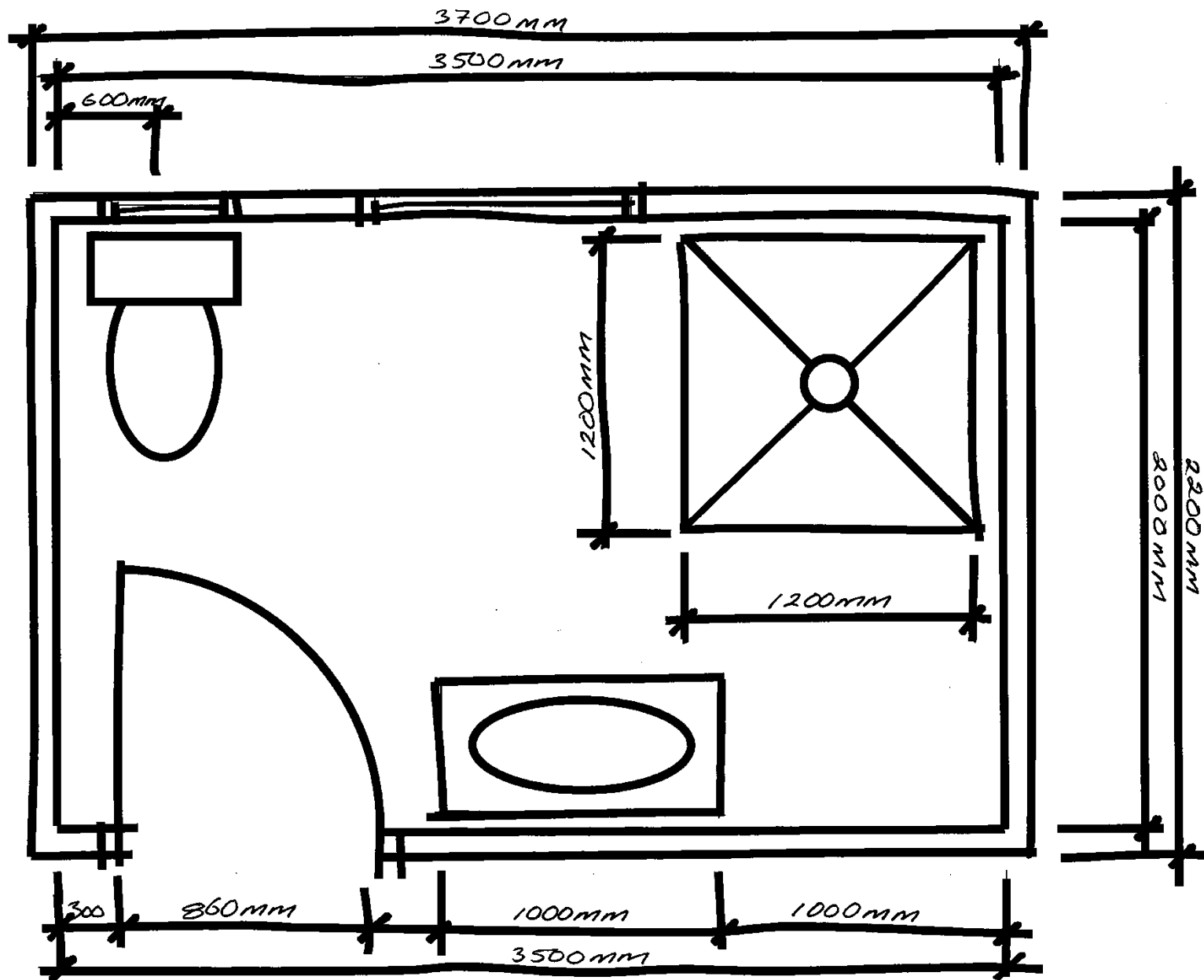
- Your design drawings will include a combination of the following;
  - Plan view of existing layout.
  - Plan view of proposed modification (with options as necessary).
  - Front elevation (as necessary).



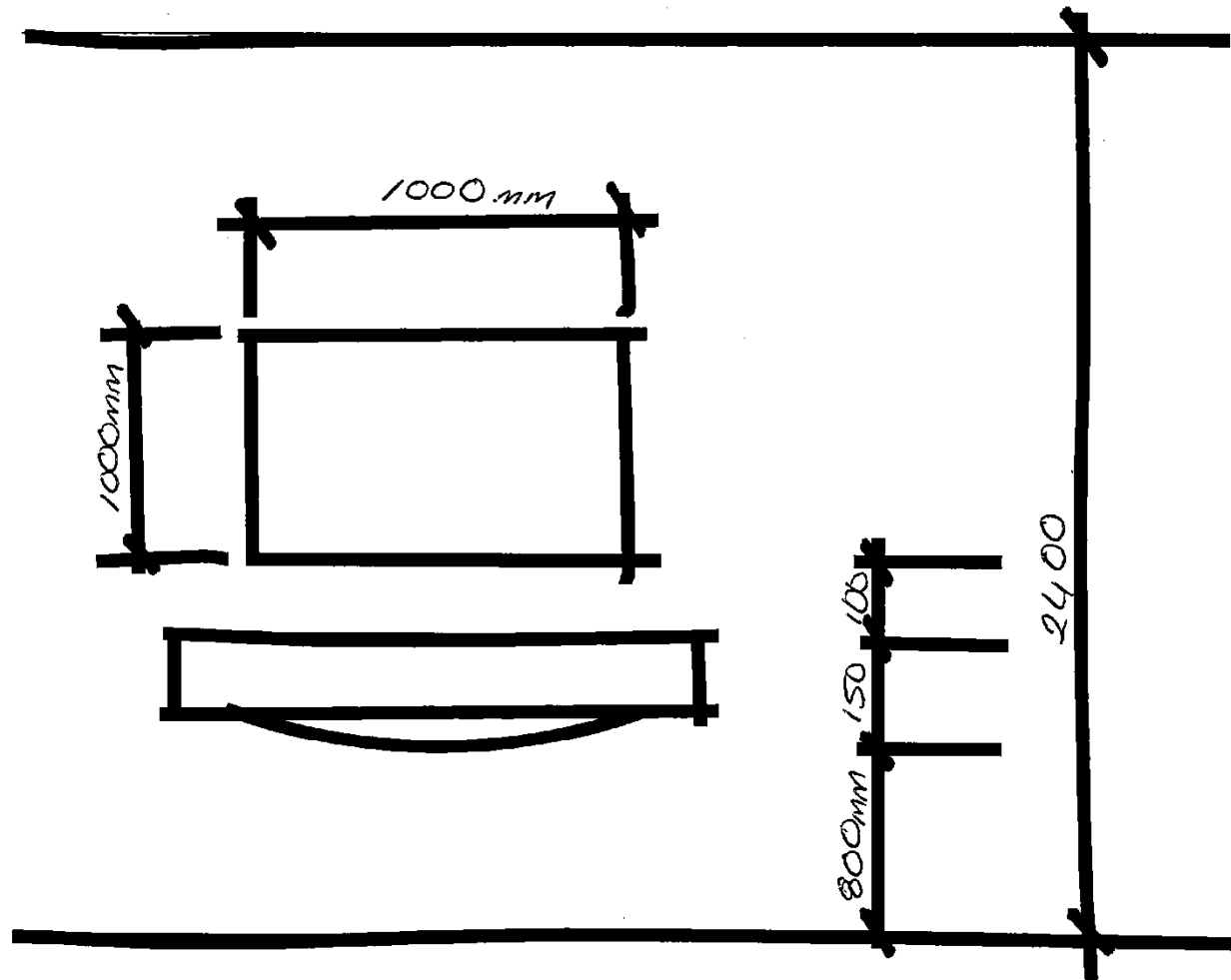
Plan View – Existing Layout



Plan View – Proposed Modification Option A

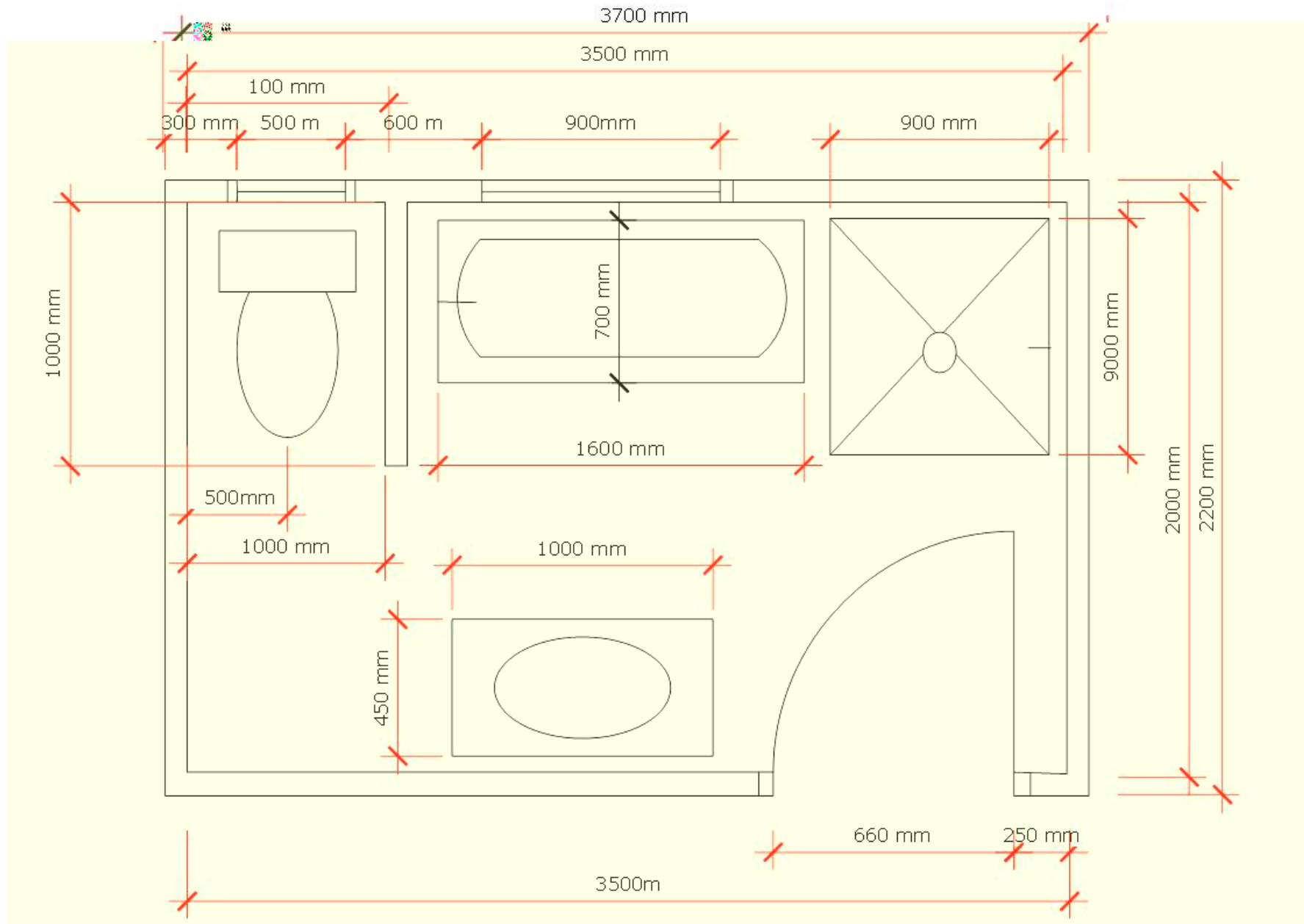


Plan View – Proposed Modification Option B

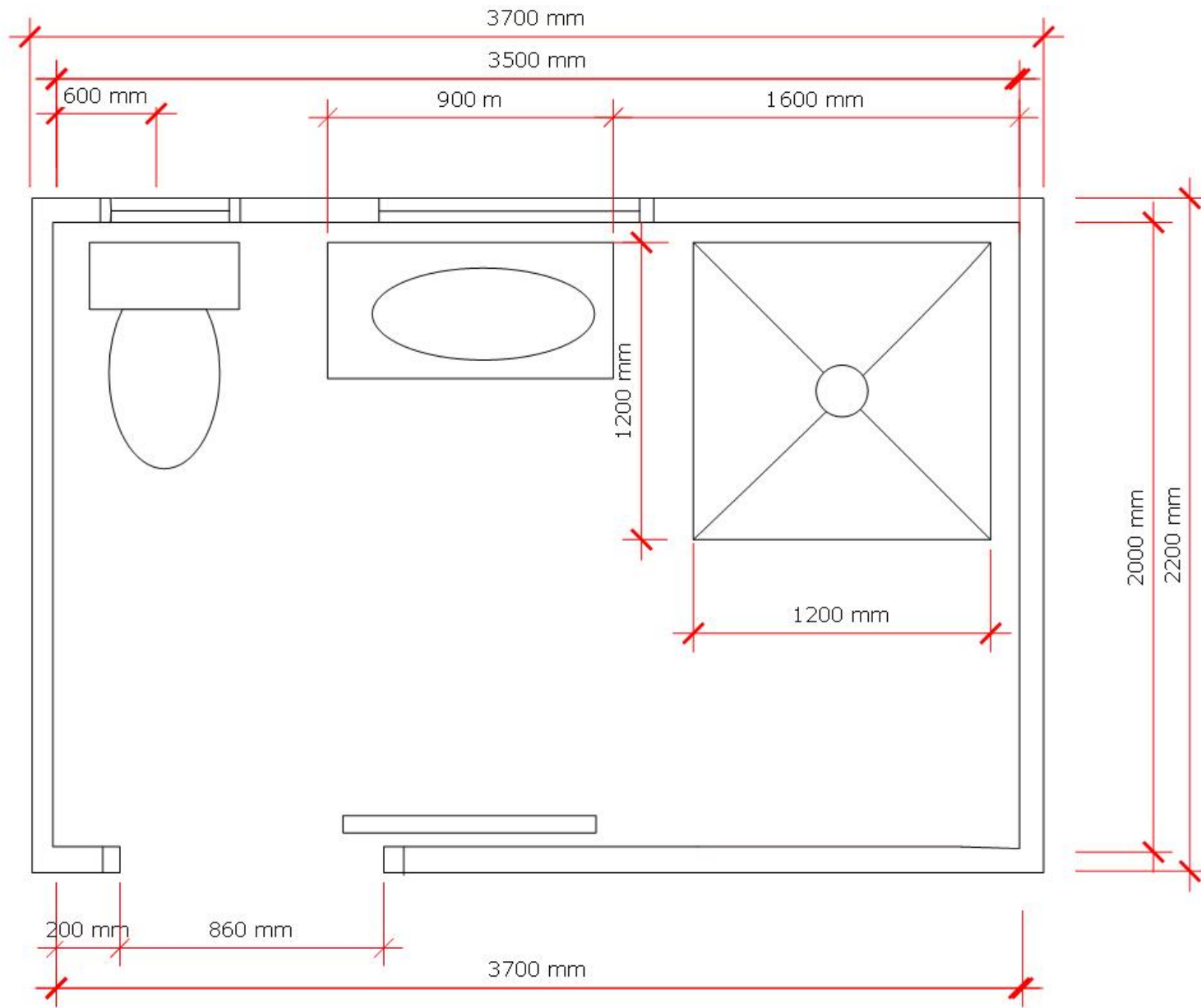


Elevation View – Proposed Modification

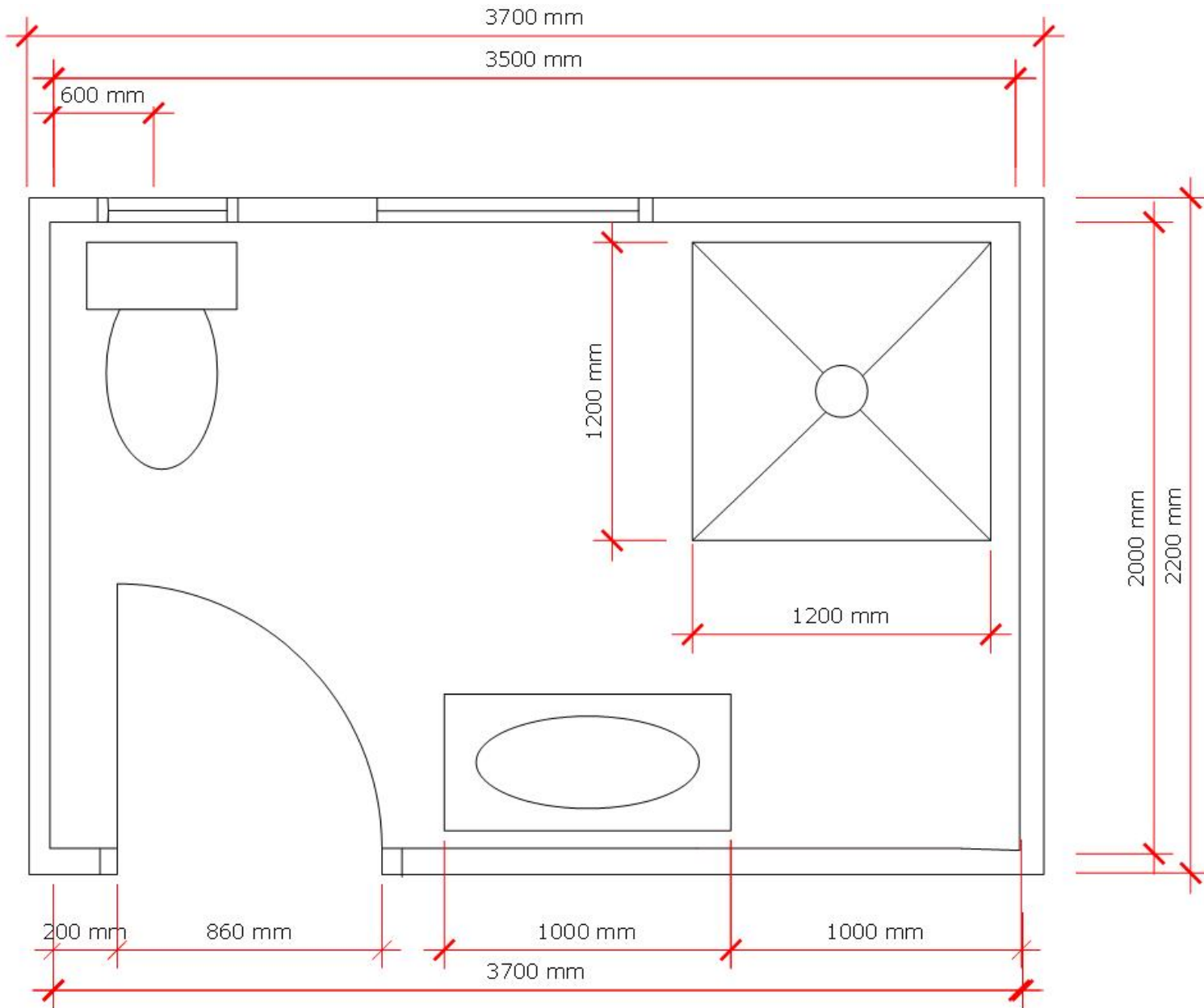




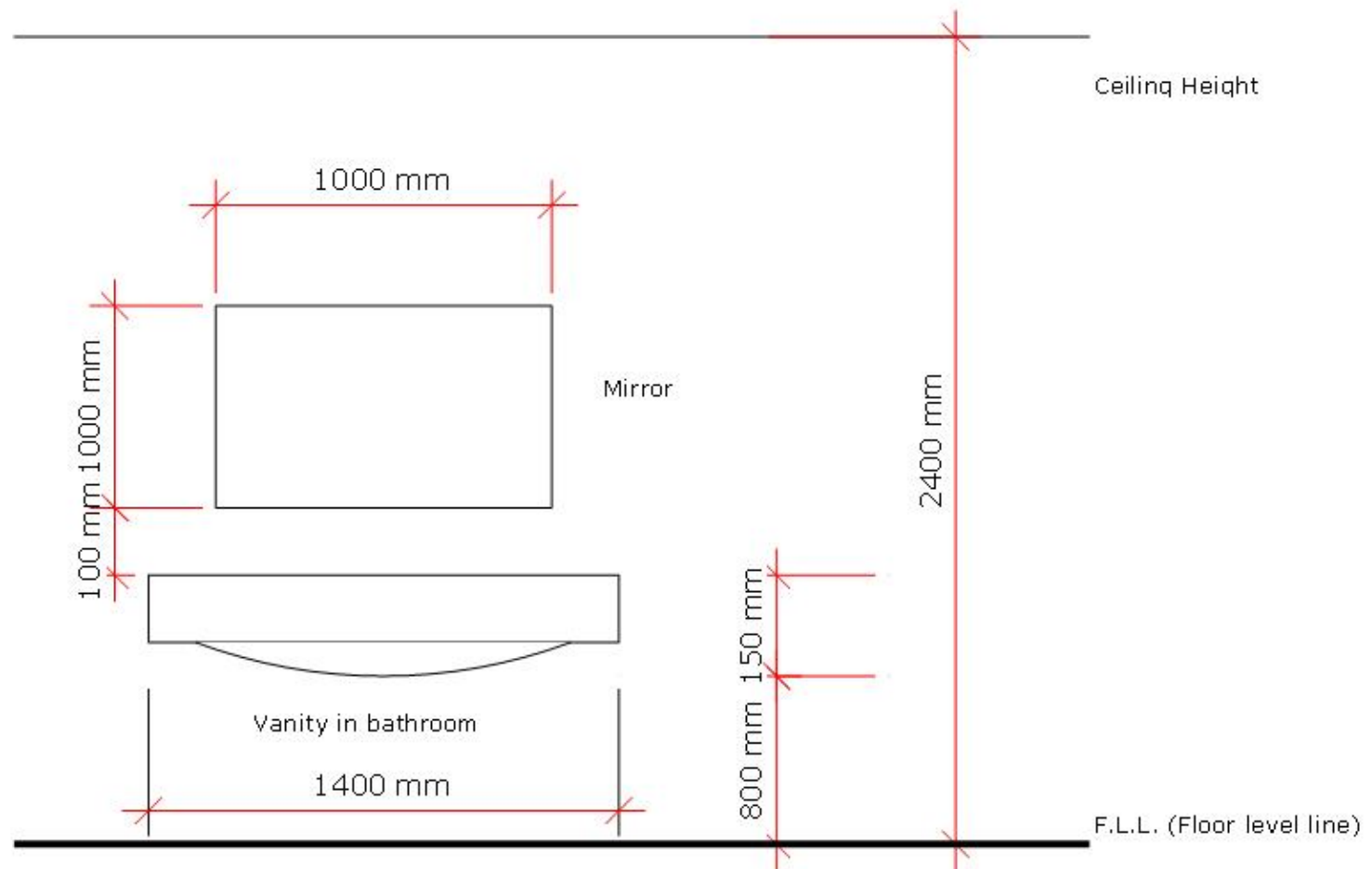
**Plan View – Existing Layout** (CAD Drawn - optional)



Plan View – Proposed Modification Option A



Plan View – Proposed Modification Option B



Elevation View – Proposed Modification

# Had difficulties?

Lets practice breaking down a room (turning 3D reality into 2D drawings).

1. Begin with drawing basic shapes – cube, rectangle, square, triangle.
2. Then practice drawing different rooms in your house.
3. Finally try some more complex examples – bathroom, ramp, easy steps.



Remember we are a team – if you get stuck ask for help from your supervisor, a more experienced colleague or from a Builder or Architectural Consultant.

