

# Year 9 Vocational Construction Unit 2 Drawing a Plan of a Room

## Assessment criteria

Pass	Merit	Distinction
<b>Learning aim A: Produce a plan of a room</b>		
<b>A.P1</b> Produce a simple plan of a room that has a scale and common symbols.	<b>A.M1</b> Produce a clear plan of a room showing use of scale and common symbols.	<b>A.D1</b> Produce an accurate plan of a room showing correct use of scale and common symbols.
<b>Learning aim B: Manage and communicate construction information on a plan</b>		
<b>B.P2</b> Transfer basic construction information about a room on to a plan.	<b>B.M2</b> Transfer construction information about a room on to a plan.	<b>B.D2</b> Transfer key construction information about a room on to a plan.

In this unit of work, learners will develop the skills needed to understand and produce different room plans, gaining experience of construction drawings. They will learn common symbols, scale, and layout as well as how to prepare a plan that records construction information. Drawings in the construction industry are used to pass ideas, information and plans to other people. These drawings are known as plans. They tell builders where to construct walls and floors and show where pipes and electric wires should be laid. They help construction teams to estimate the cost of a build.

What will be assessed in this piece of work:

A Produce a plan of a room

B Manage and communicate construction information on a plan.

Skills

- Managing information: producing a plan of a room to a simple scale, collecting, and organising information, representing information in different ways.
- Communicating information: using common symbols to identify important construction information, communicating information to others through common symbols, using written language to inform others.

Resources you may require completing this task:

- Pencil
- Ruler
- Rubber
- Tape measure (if you have one)
- Calculator
- Square drawing paper (provided in the booklet)

# Construction symbols you need to learn.



blockwork



brickwork



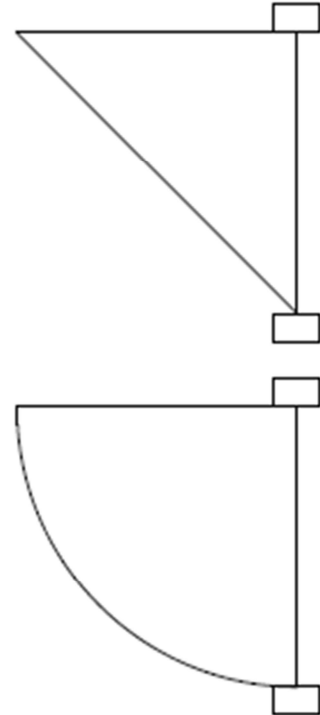
timber  
or wood



stud work partition



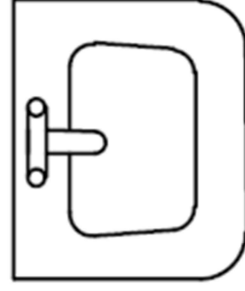
single glazed  
double glazed windows



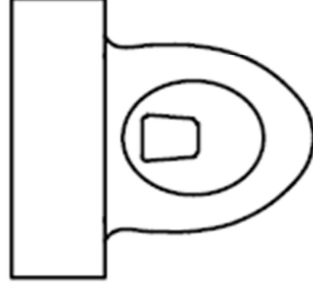
doors  
either is acceptable  
triangular is quicker



cold water pipe  
gas pipe



wash hand basin



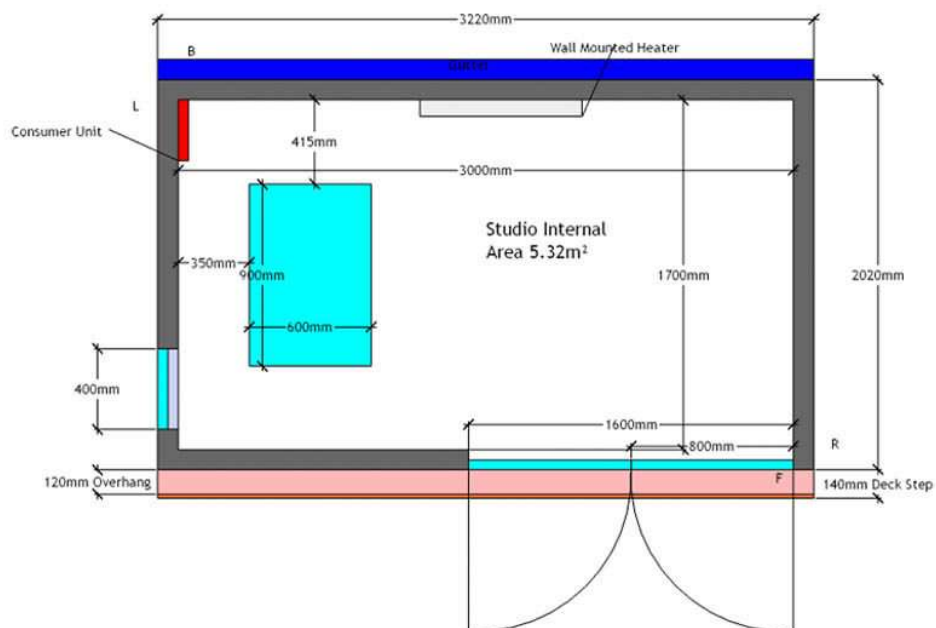
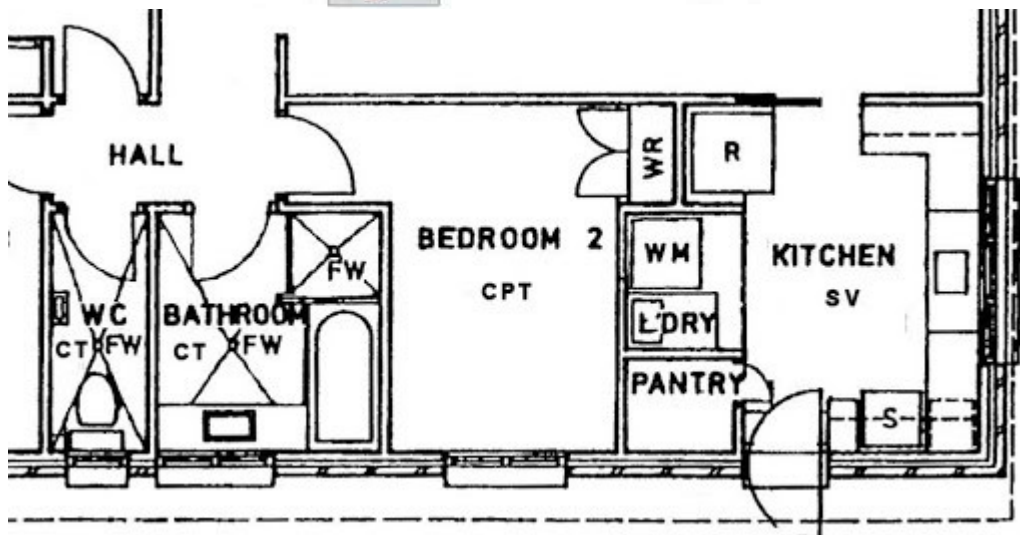
wc or toilet



electric sockets  
single and double



Examples of room plans

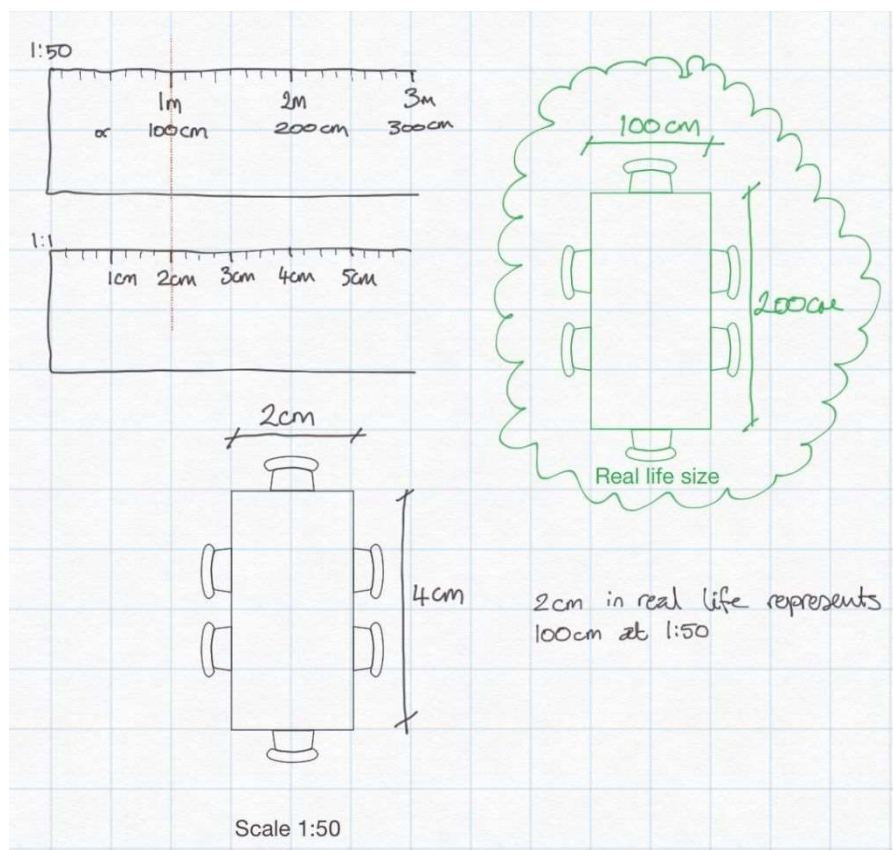


## Drawing using a scale

In the real world, one meter is equal to one meter. A drawing at a scale of 1:10 means that the object is 10 times smaller than in real life scale 1:1. You could also say, 1 unit in the drawing is equal to 10 units in real life. As the numbers in the scale get bigger, i.e. 1:50 – 1:200, the elements in the drawing actually get smaller. This is because in a drawing at 1:50 there is 1 unit for every 50 unit in real life. It is worth noting that scale drawings represent the same units. So, if a drawing is at 1:50 in cm, 1cm in the drawing will be equal to 50cm in real life.

To draw a plan of a room on an A4 piece of paper is not possible. This is why we use a scale. If you look at the examples on the previous page, they show a room or several rooms in a much smaller drawing than the room size.

A good scale for you to use when drawing your room is 1:50, 1:20 or 1:10. How can you work out the scale? So, if we were drawing a table that measured 100cm wide by 200cm long at a scale of 1:50, you would draw the table 2cm wide by 4cm long on your piece of paper. This is worked out by dividing the real-life size (100cm) by 50 (1:50 scale). This gives you a result of 2cm. For the length of the table we divide 200cm by 50 to get a result of 4cm.



## Task

You are helping a friend with an extension that they are building on the back of their house. The builder wants to know where the doors, windows, electrics, water pipes and other aspects need to be positioned. Your friend is not very good at planning out what they want and where they want it but you are very good at planning. Your friend asks you to draw out their plan for them so that they can give it to the builder.

Using a given room, draw out the plan of the room in the correct format to a scale of 1: 10 and use the correct symbols for all aspects of the room. You should present your work and all relevant information in a professional format and make sure that you communicate all information clearly. If you are having difficulty drawing at a scale of 1:10, then use 1:20 or 1:50

I suggest that the extension will be a kitchen. Use your own kitchen where you live and create a plan drawing on the square paper provided. Use the construction symbols provided to add elements to your plan. Fill in the table below by looking at your kitchen and recording the information to check it is added to your drawing.

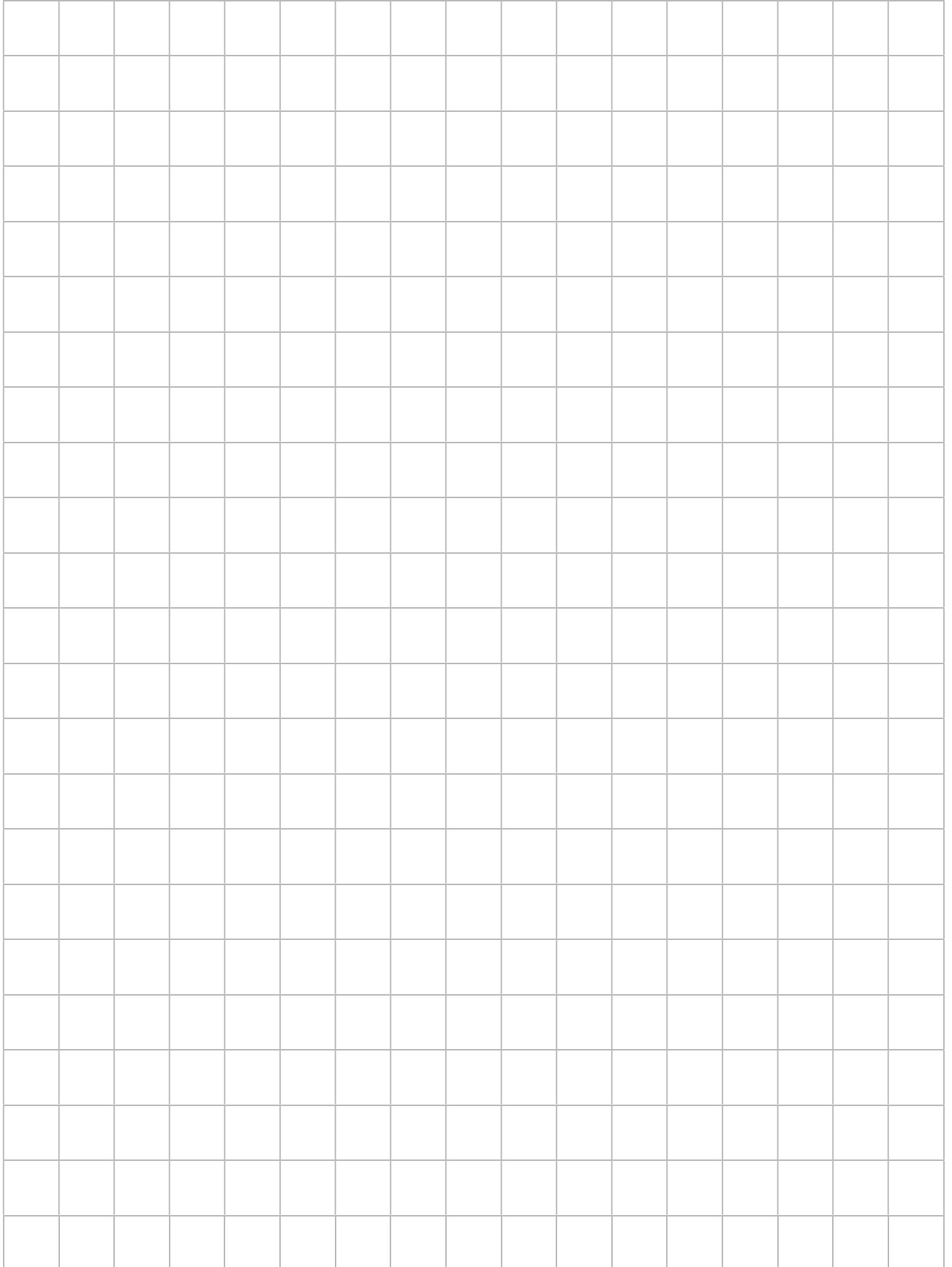
Object	Number	Size/s
Doors		
Windows		
Walls		
Sink		
Pipes		N/A
Electrical sockets		N/A

Make sure you include measurements on your drawing. Most measurements on this type of drawing will be in millimetres. If you do not have a tape measure then estimate the size in centimetre and then times by 10 e.g. 1cm x 10 = 10mm, 10cm x 10 = 100mm, 100cm x 10 = 1000mm. If you look at the example drawings, the last image shows the plan with measurements on.

# 1 cm Graph Paper

One line per centimeter.

Grey lines.



# 1 cm Graph Paper

One line per centimeter.

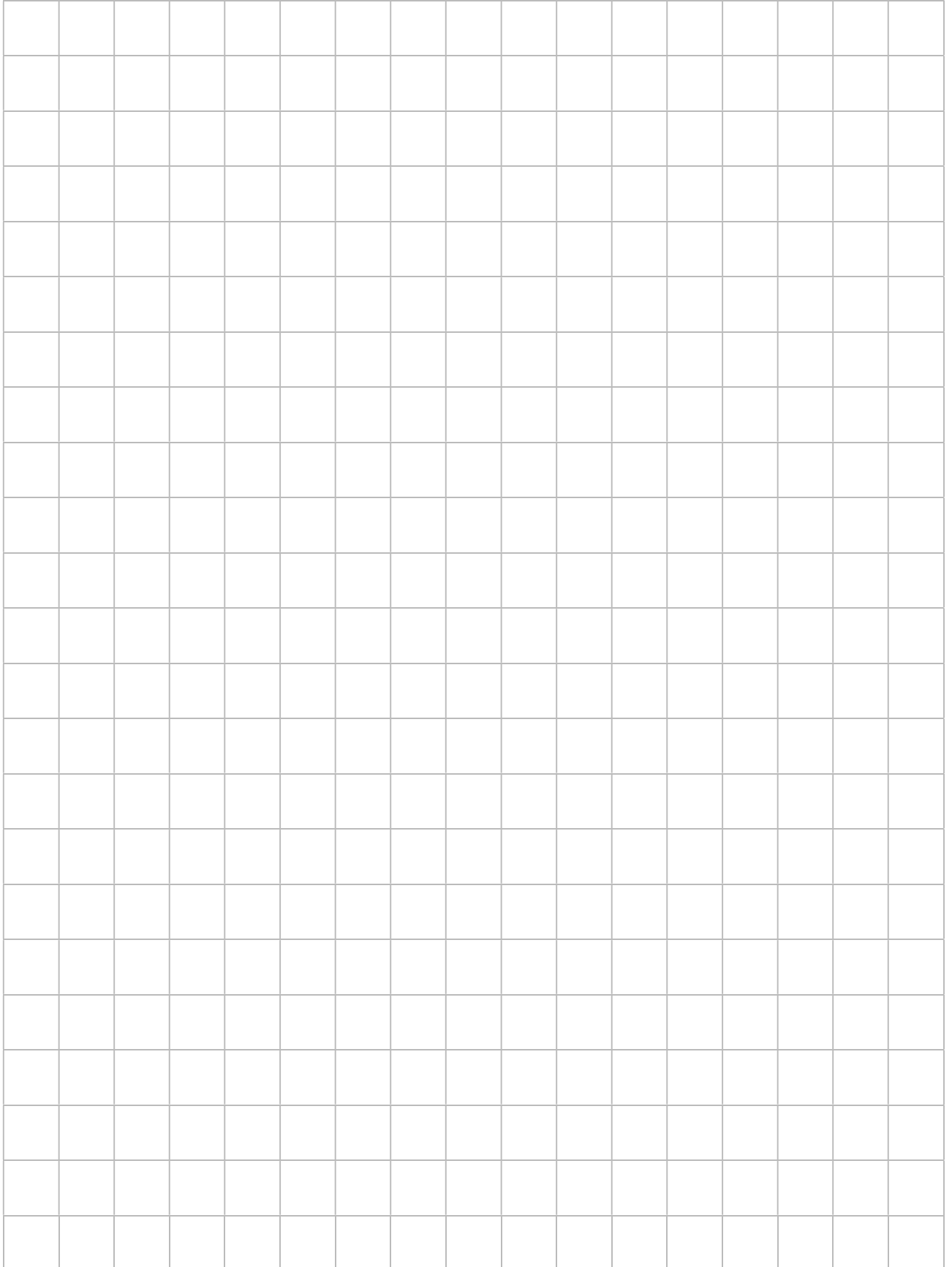
Grey lines.



# 1 cm Graph Paper

One line per centimeter.

Grey lines.



# 0.25 cm Graph Paper

Four lines per centimeter.

Grey lines.



# 0.25 cm Graph Paper

Four lines per centimeter.

Grey lines.

