Learning and Evaluation Situation

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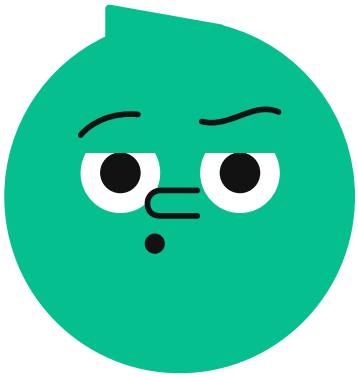


Design Your Dream Room

Scale and Dimensioning

Student Booklet

120 min.

Scenario

You have decided to hire a team of interior decorators to help you redesign your bedroom. The first step in the project is choosing the furniture and accessories that will go in your room. Once you've picked everything out, you will need to indicate the position and dimensions of certain items.

During this activity, you'll have the opportunity to apply your existing knowledge of **basic lines** and learn new concepts related to **scale** and **dimensioning**.

At the end of the activity, you'll need to hand in the Student Workbook and your floor plan to the lead decorator, your teacher.

Part 1 : Making a Floor Plan

Follow these steps to design your dream room.

1. In Appendix 1, choose the items that you want to put in your room:
   - ☐ 1 bed
   - ☐ 2 to 3 pieces of furniture
   - ☐ 1 seat
   - ☐ 1 to 3 items from the Entertainment category
   - ☐ 1 to 2 items from the Accessories category

2. Cut all of your chosen items out with scissors.

3. Arrange your items on your floor plan as desired.

4. Once you're happy, glue everything down with a glue stick.

Part 2 : Reactivating Knowledge of Basic Lines

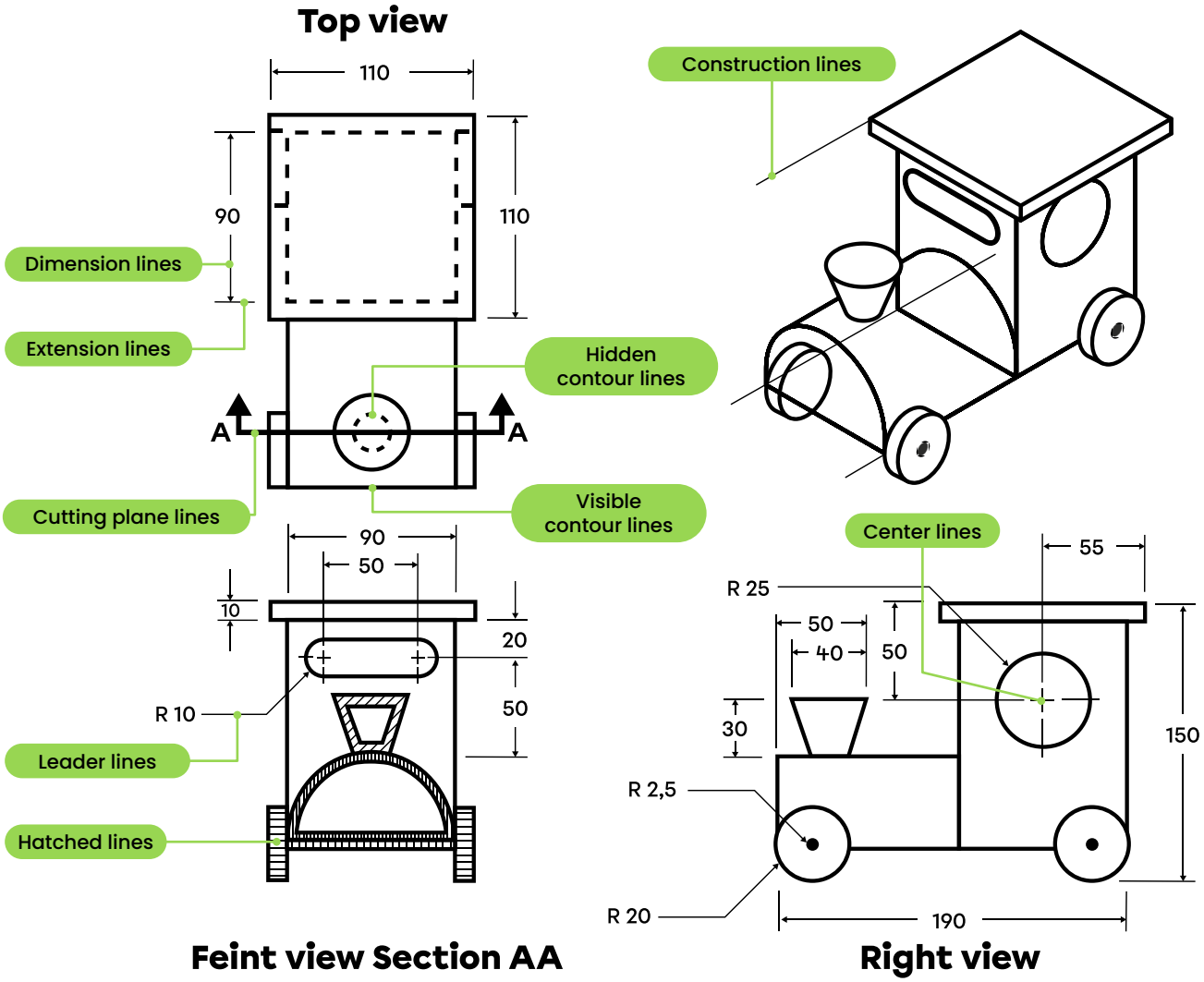
Basic Lines

Definition

Basic lines are lines whose appearance and meaning are governed by international conventions. They are used to show all the characteristics and details of an object in a technical drawing.

The following image shows a technical drawing of a toy train.
It includes the main basic lines.

Scan this QR code to read a description of each basic line.



Part 3 : Scale and Dimensioning

Scale

Definition

In technical drawing, the **scale** describes the relationship between the dimensions of an object in a drawing and its actual dimensions.

The scale must be written in the box as follows.

Dimensions in drawing : Actual dimensions

NAME: ALLOPROF	**DATE:** 2025
TITLE: OVERVIEW DRAWING, BOOKSHELF	**SCALE:** 1 : 8

There are 3 types of scale. Scan the following QR codes to see a description and example for each type of scale.

Reduction scale

Enlargement scale

Actual size scale

Example

A bookcase has an actual width of 400 mm. In the drawing, this measurement is represented by a 50 mm line. What is the scale of the drawing?

Calculation space

Individual Work Time

Answer the following questions about scale.

1. The floor plan of your dream room is drawn using a(n)...
   - ☐ Reduction scale
   - ☐ Enlargement scale
   - ☐ Actual size scale

The student matches a scale to its use.	1 pt	0 pt

2. If you had to draw a Monopoly game piece, what would be the best scale to use?

- ☐ 1 : 1
- ☐ 1 : 5
- ☐ 2 : 1
- ☐ 10 : 1

The student chooses the appropriate scale.	1 pt	0 pt

3.
- The actual length of the bed is 1900 mm. Write down this measurement in your calculation space.
- Using a ruler, measure the length of the bed on the floor plan of your room and write it in the calculation space.
- Using the actual length of the bed and the length measured on the drawing, calculate the scale of your bedroom floor plan, then enter the scale in the "Scale" box on your floor plan.

Calculation Space

The floor plan of my bedroom uses a _____ scale.

☐ I've entered the scale in the "Scale" box of my floor plan.

The student correctly calculates the scale using an appropriate method.	4 pts
The student uses an appropriate calculation method, but their work includes a minor error.	3 pts
The student uses an appropriate calculation method, but their work includes several errors.	1 pt
The student does not use an appropriate calculation method.	0 pt
Comments:	

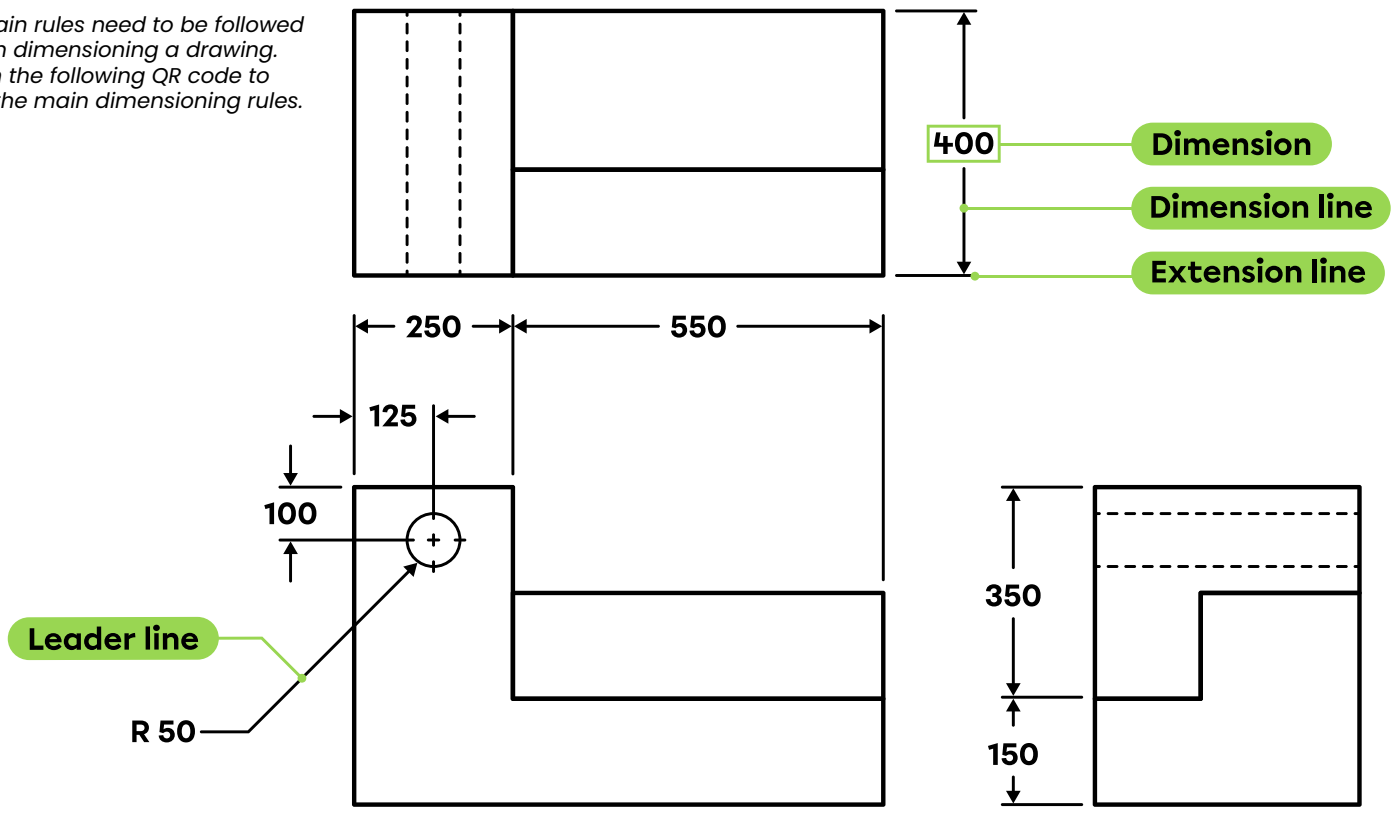
Dimensioning

Definitions

- A **dimension** is a number that represents the actual measurements of an object in a technical drawing.
- **Dimensioning** is the act of using basic lines and dimensions to represent the actual measurements and position of various elements in a technical drawing.

Dimensions are generally expressed in millimetres (mm). It is assumed that all dimensions shown in technical drawings are in millimetres, so the units are not indicated. For example, in a technical drawing, a dimension of 400 mm is written as 400.

Certain rules need to be followed when dimensioning a drawing. Scan the following QR code to see the main dimensioning rules.



Individual Work Time

Complete your floor plan by adding all the required elements.

Tip

Start by lightly sketching out your lines so they're easier to erase. Once you're happy with your work, you can make the lines thicker and darker.

4. Add the dimensions needed to indicate the position and measurements of…
   - ☐ The bed
   - ☐ A piece of storage furniture
   - ☐ A seat
   - ☐ A circular object

5. Add the needed dimensions for…
   - ☐ The door width
   - ☐ The door swing angle
   - ☐ The total room dimensions

Once you've finished dimensioning, hand in your floor plan to the lead decorator, your teacher.