



In this activity you will work out actual measurements from plans.

### Information sheet

Plans are used by people who work in construction or interior design. They use them to show the customer what has been designed for them. Measurements from plans are used when ordering materials and estimating costs.

### Think about...

How you can work out the actual size from a measurement on a scale diagram.

### Conversions

$$1 \text{ cm} = 10 \text{ mm}$$

$$100 \text{ cm} = 1 \text{ m}$$

$$1000 \text{ mm} = 1 \text{ m}$$

$$10 \text{ cm} = 0.1 \text{ m}$$

### Ratio scales

If the scale of the plan is 1 : 100, this means the real measurements are 100 times longer than they are on the plan.

So 1 cm on the plan represents a real length of 100 cm (1 metre)

### Try these ...

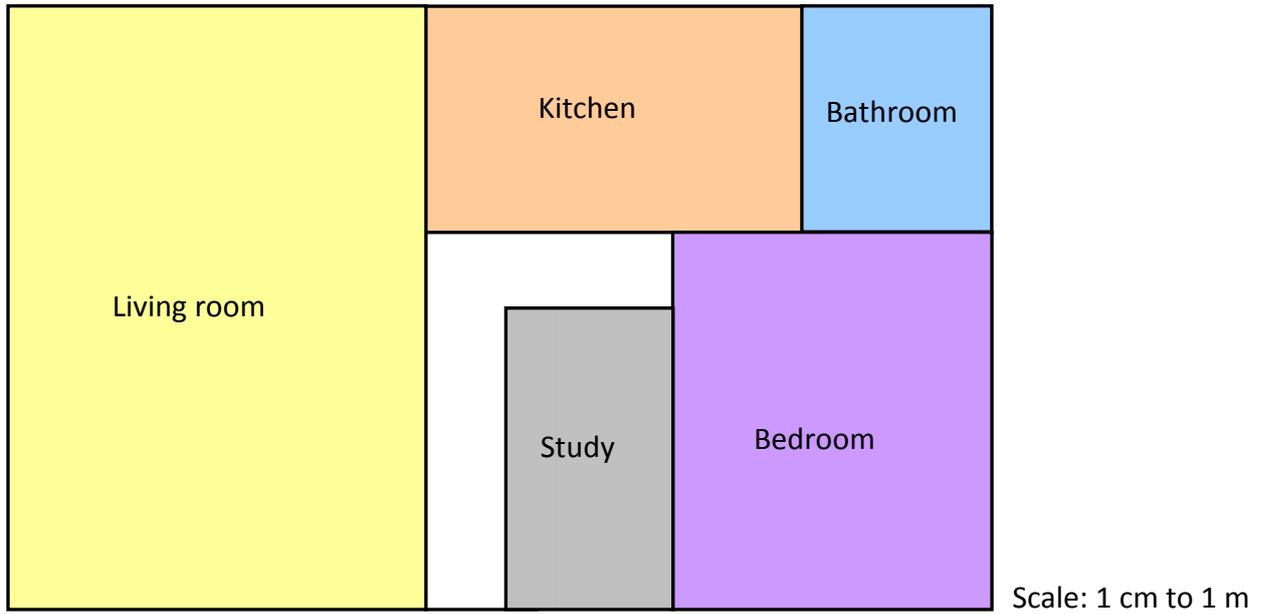
You teacher will give you some plans to work on.  
Measure the lengths and complete each table.

### At the end of the activity

Describe how you use a scale like 1 : 50 to work out an actual measurement.

# Flat

The diagram below is the plan of a flat.



Measure the length and width of each room on the plan in centimetres.

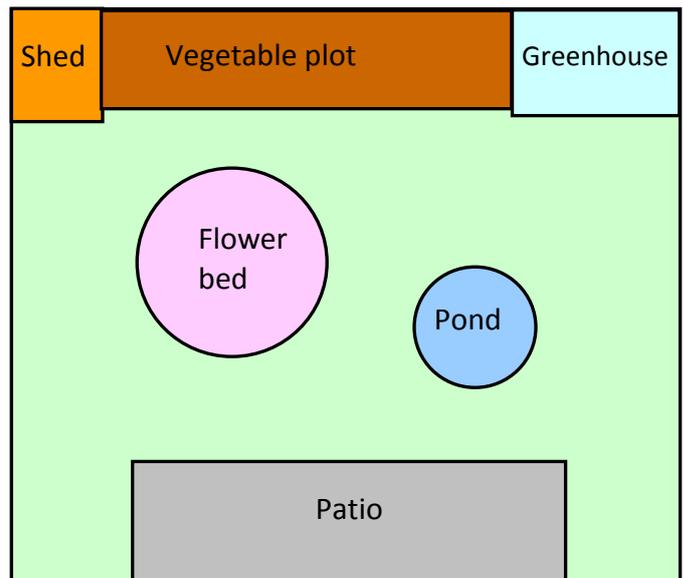
Put your answers in these columns in the table.

Room	Length on plan	Width on plan	Actual length	Actual width
Living room				
Kitchen				
Bedroom				
Bathroom				
Study				

Write the actual dimensions in the last two columns.

## Garden

The plan of a garden is shown here.



Measure the dimensions listed in the table in centimetres to 1 decimal place.

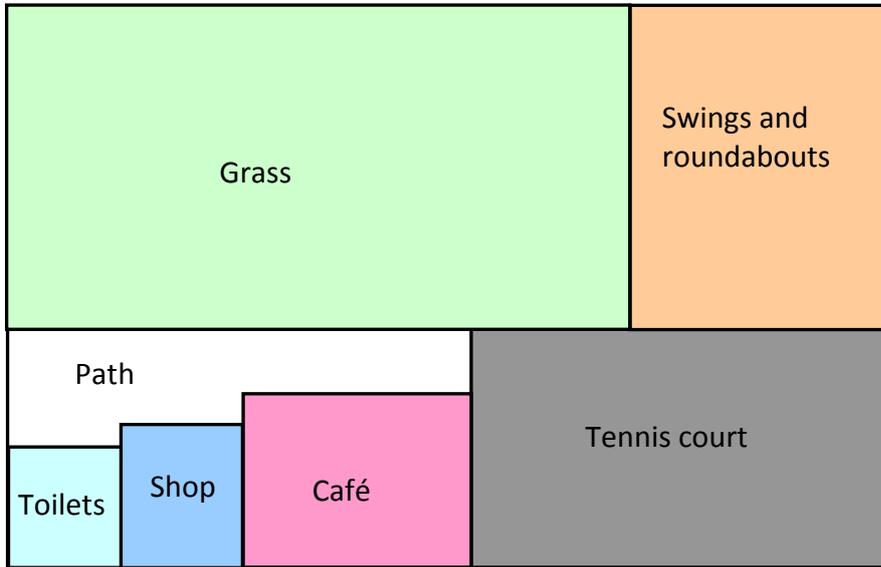
Work out the actual dimensions. Put your answers in the table below.

Scale: 1 cm to 2 m

Dimensions	On plan	Actual
Garden – length		
Garden – width		
Vegetable plot – length		
Vegetable plot – width		
Shed – length		
Shed – width		
Greenhouse – length		
Greenhouse – width		
Patio – length		
Patio – width		
Flowerbed – diameter		
Pond – diameter		

## Park

The diagram shows the plan of a park. Complete the table below it.  
Measure lengths in centimetres to 1 decimal place.

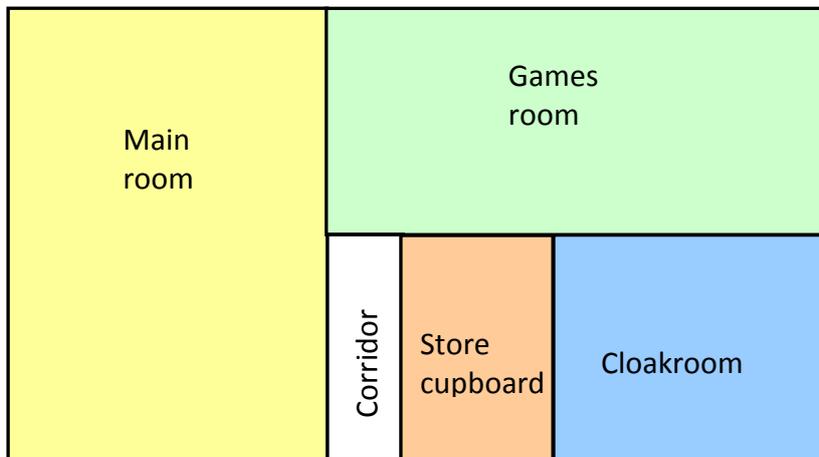


Scale:  
1 cm represents 5 m

Dimensions of areas of the park	On plan	Actual
Grass – length		
Grass – width		
Swings and roundabouts – length		
Swings and roundabouts – width		
Café – length		
Café – width		
Toilets – length		
Toilets – width		
Tennis court – length		
Tennis court – width		
Shop – length		
Shop – width		

## Youth club

The diagram shows the plan of a youth club. Complete the table by finding the dimensions listed.



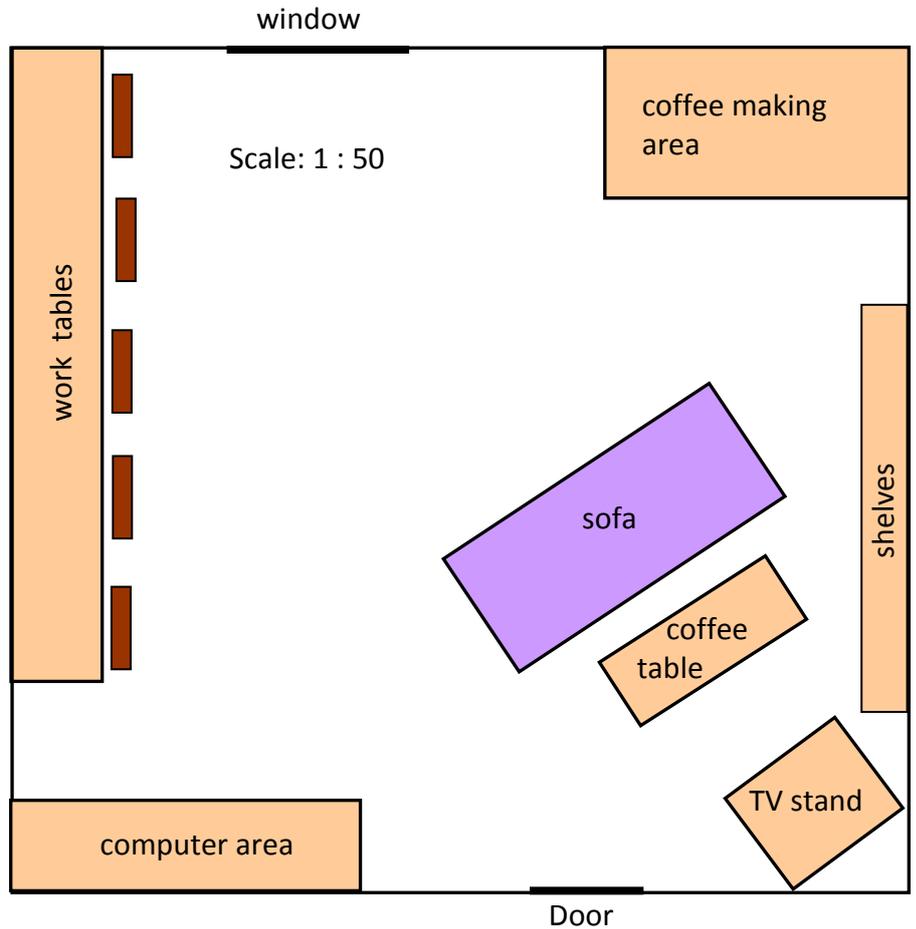
Scale: 1 : 100

Dimension	On plan	Actual
Main room – length		
Main room – width		
Games room – length		
Games room – width		
Store cupboard – length		
Store cupboard – width		
Cloakroom – length		
Cloakroom – width		
Corridor – length		
Corridor – width		
Youth club – length		
Youth club – width		

## Common room

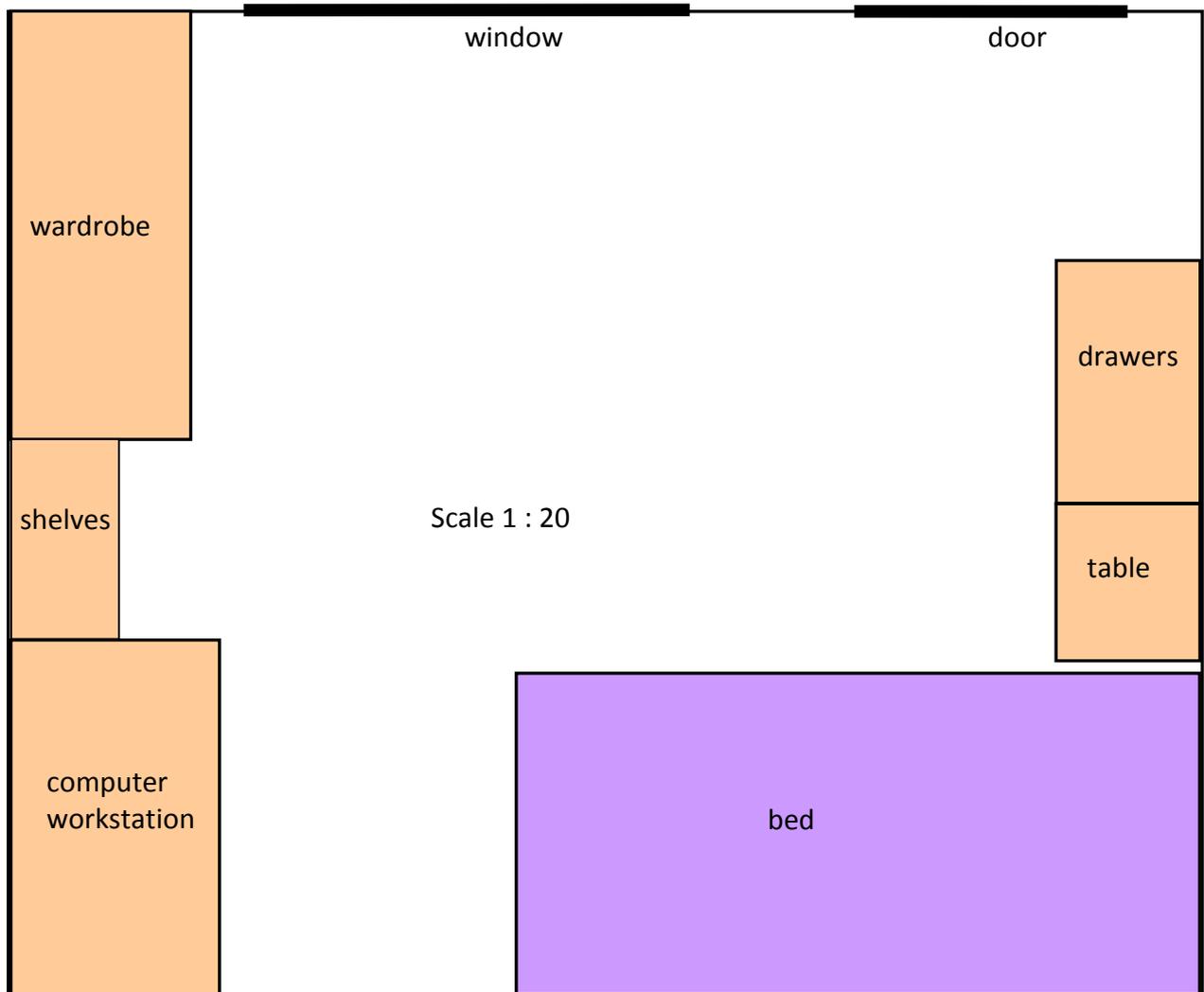
The diagram shows the plan of a student common room.

Complete the table by finding the dimensions listed.



Dimension	On plan	Actual
Common room – length		
Common room – width		
Coffee making area – length		
Coffee making area – width		
Work tables – length		
Work tables – width		
Computer area – length		
Computer area – width		
Shelves – length		
Shelves – width		
TV stand – length		
TV stand – width		
Coffee table – length		
Coffee table – width		
Sofa – length		
Sofa – width		

## Bedroom

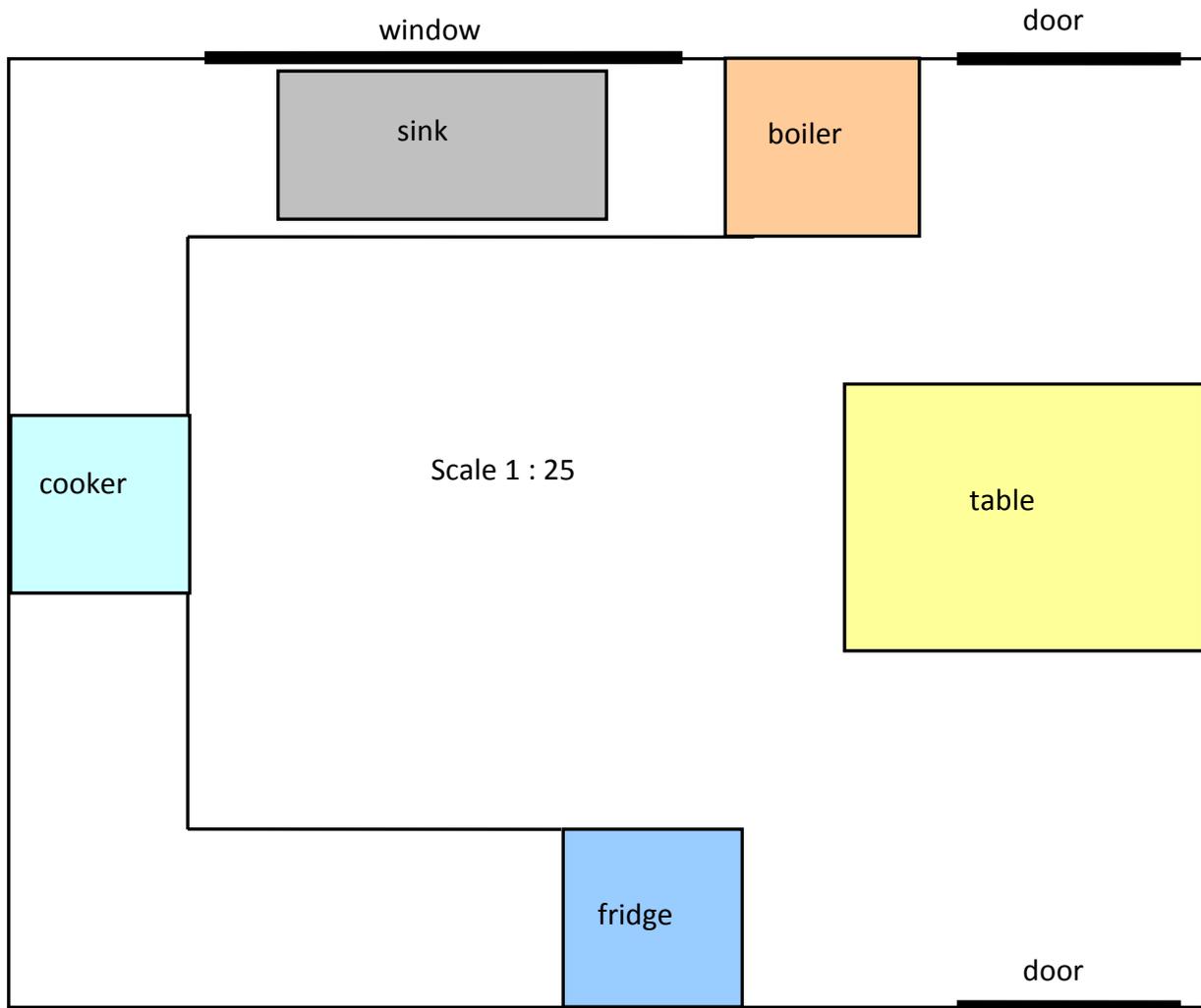


Find the actual dimensions of the items listed in the table below.

Dimension	On plan	Actual
Bedroom – length		
Bedroom – width		
Bed – length		
Bed – width		
Wardrobe – length		
Wardrobe – width		
Drawers – length		
Drawers – width		

Dimension	On plan	Actual
Table – length		
Table – width		
Shelves – length		
Shelves – width		
Window – width		
Door – width		
Workstation – length		
Workstation – width		

# Kitchen



Find the actual dimensions of the items listed in the table below.

Dimension	On plan	Actual
Kitchen – length		
Kitchen – width		
Table – length		
Table – width		
Sink – length		
Sink – width		
Cooker – length		

Dimension	On plan	Actual
Cooker – width		
Boiler – length		
Boiler – width		
Fridge – length		
Fridge – width		
Window – width		
Doors – width		