

# Graphic Communication



## Scale Drawings



# Scale Drawings

- Scale drawings are used to draw an object to a proportion of its real size to offer a real life size in proportion to other scaled objects around it.
- They are particularly useful when modelling an area.



# Scale Drawings

- When we draw an object to scale we either make it larger or smaller.
- If, in real life, the object is very large then we will probably want to make it smaller.
- On the other hand, if, in real life, the object is very small then we will probably want to make it larger.



# Scale Drawings

- Some examples of scales that are drawn larger than the object in real life are shown below:
- 2:1 - 2 units on drawing = 1 in real life
- 3:2 - 3 units on drawing = 2 in real life
- 5:1 - 5 units on drawing = 1 in real life
- 50:1 - 50 units on drawing = 1 in real life



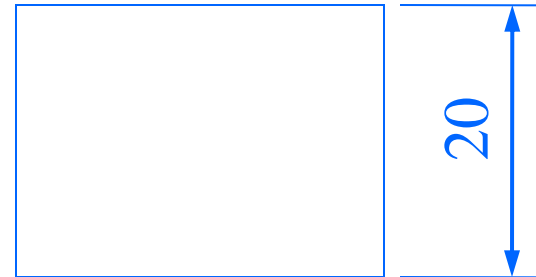
# Scale Drawings

- These scales can be worked out as follows:
- $3:2 = \frac{3}{2}$  as expressed as a fraction
- This means that the dimension x 3 then divided by 2 is the size of the scaled length.

# Scale Drawings

## ■ Worked example:

Write the dimension on the right at a scale of 3:2



Scale is 3:2 therefore can be written as  $\frac{3}{2}$

$$\blacklozenge \frac{3 \times 20}{2} = \frac{60}{2} = 30$$

◆ The scaled dimension is 30mm



# Scale Drawings

- Some examples of scales that are drawn smaller than the object in real life are shown below:
- 1:2 - 1 unit on drawing = 2 in real life
- 2:3 - 2 units on drawing = 3 in real life
- 1:50 - 1 unit on drawing = 50 in real life
- 1:2500 - 1 unit on drawing = 2500 in real life



# Scale Drawings

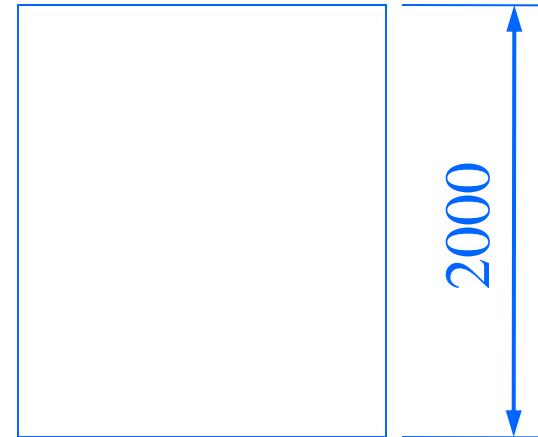
- These scales can be worked out as follows:
- $1:50 = 1/50$  as expressed as a fraction
- This means that the dimension  $\times 1$  then divided by 50 is the size of the scaled length.



# Scale Drawings

## ■ Worked example:

Write the dimension on the right at a scale of 1:50



Scale is 1:50 therefore can be written as  $\frac{1}{50}$

$$\blacklozenge \frac{1 \times 2000}{50} = \frac{2000}{50} = 40$$

◆ The scaled dimension is 40mm



# Scale Drawings - Rules

- If a scale is written with a larger number first then the drawing is larger than real life. E.g. 2:1 is double real life size.
- If a scale is written with a smaller number first then the drawing is smaller than real life. E.g. 1:2 is half real life size.