

TECHNICAL DRAWINGS

SCALE

scale statement
model: original

- * same units
- * lowest terms

$$S.F. = \frac{\text{model}}{\text{original}}$$

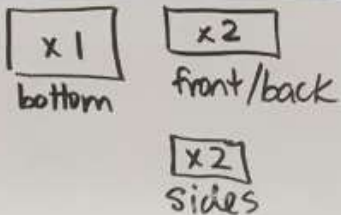
↑ scale factor

ORTHOGRAPHIC

2D views of 3D object

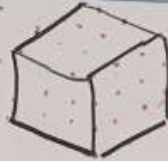


COMPONENT PARTS



2D view of all parts

ISOMETRIC



3D representation
(all dimensions at same scale)

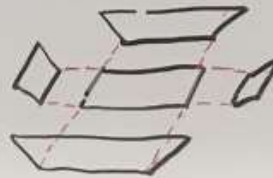
- no horizontal lines!

PERSPECTIVE



true 3D view

EXPLODED VIEW



shows how parts fit together

to solve SCALE problems:

set up proportion

$$\frac{M}{O} = \frac{\quad}{\quad}$$

* pay attention to units

to calculate drawing/diagram lengths:
* always label drawings with ACTUAL lengths!

$$\text{model} = S.F. \times \text{original}$$

eg. 1.2m at 1:20

$$1.2\text{m} \times 100 = 120\text{cm}$$

$$120\text{cm} \times \frac{1}{20} = \frac{120}{20} = \underline{6\text{cm}}$$

drawing