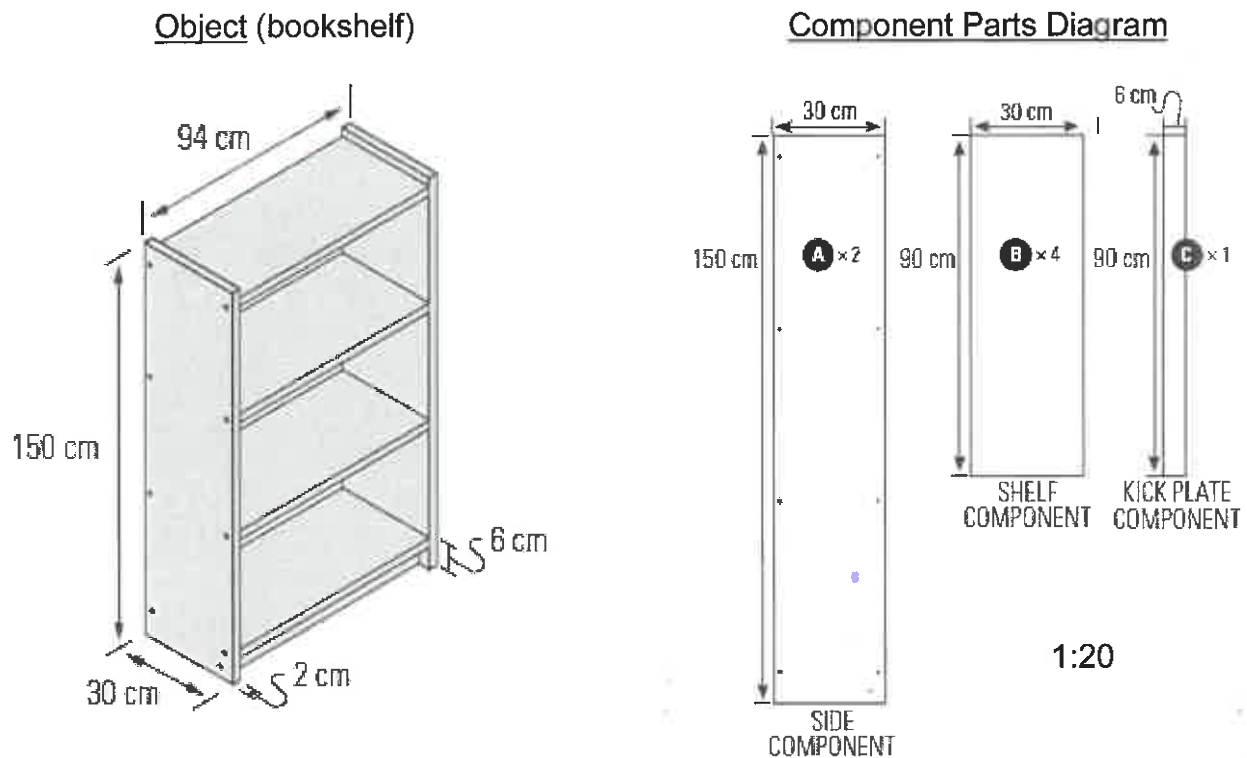


NOTES: Component Parts Diagrams

Date: Nov. 14

A **component parts diagram** is a 2-D scale drawing that shows all the parts needed to assemble an object.

Example



Key steps when creating a component parts diagram:

1. Determine all of the parts (components) that make up the object – if parts are identical, you only have to draw one.
2. Determine an appropriate scale (if one isn't given).
3. Calculate the diagram lengths for each component (model = S.F. × original).
4. Draw each component (use a ruler and measure lengths accurately; ignore the thickness of parts unless specifically instructed otherwise).
5. Label all parts and dimensions (actual lengths). Label each part with the quantity needed. Include a scale statement on your diagram.

Scale statement

$$M \rightarrow 1:10 \leftarrow R \circ$$

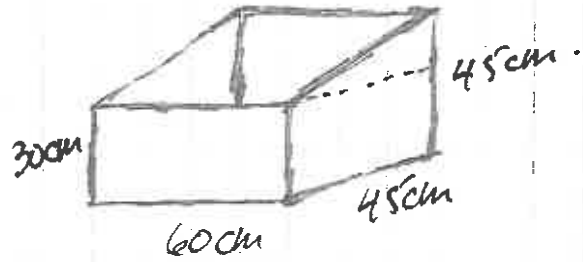
$$SF = \frac{1}{10} \left(\frac{M}{R \circ} \right)$$

$$\text{diagram lengths} = SF \times \text{actual length}$$

Example

Brian plans on building an opened-top box to hold firewood and kindling for his summer cabin.

From his sketch, draw and label the component parts of the box using a scale of 1:10. You can ignore the thickness of the wood.



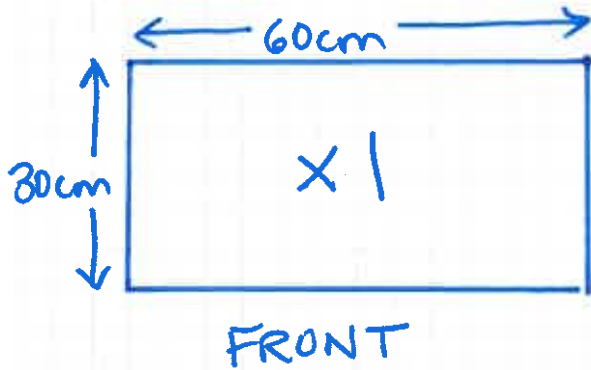
- Parts: front 30x60 (x1)
 bottom/back 60x45 (x2)
 sides 30x45 (x2)

Diagram Lengths

$$30\text{cm} \times \frac{1}{10} = \frac{30}{10} = 3\text{cm}$$

$$45\text{cm} \times \frac{1}{10} = \frac{45}{10} = 4.5\text{cm}$$

$$60\text{cm} \times \frac{1}{10} = \frac{60}{10} = 6\text{cm}$$



WOOD BOX
COMPONENT PARTS
DIAGRAM
 1:10

