1 A National Sailing Club has a sailing boat logo that appears as part of its national identity on all the club merchandise. Details
of the sailing boat logo are shown to the right.

Complete the full size drawing of the sailing boat logo below by
(a) adding the R60 quadrant and the missing line to form
(b) constructing the semi ellipse and the $R 85$ curve to form the spinnaker;
c) drawing the remaining part of the mainsail and the triangular
pennant sail;
(d) drawing the $\varnothing 10$ mast to the correct height with the $\varnothing_{10}$ ball on the mast top;
(e) adding the letters NSC to the hull of the sailing boat logo
(f) colouring part (e) only.
[3]


2 An exploded pictorial view of a castor for a supermarket trolley is shown to the right. The nylon wheel rotates on a $\varnothing 10$ sha
that is held in place in the castor body by a roll pin. The swivel sits in a $\varnothing 30$ recess in the castor body and is secured by a M10 HEX HD bolt 25 long.
(a) Draw to a scale of 1:1 in either first or third angle orthographic proj
assembled parts:
(i) a sectional view taken through the centre of the castor body looking in the direction of the arrow $\mathbf{S}$; [12]
(ii) the end view looking in the direction of the arrow EV
(iii) the plan.
[6]
Show the M10 threaded hole and the machine screw in the sectional view (i) only. sectional view (i) only.
Hidden detail is not required in any view. Dimensions not shown are left for you to decide.
(b) In the space indicated, draw the symbol for the angle of projection you have used for your drawing.


DRAW THE SYMBOL FOR THE ANGLE OF

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Write your surname, other names, Centre number and candidate number in the spaces provided. Aswer any two questions.
Draw your answers in the spaces provided on the question paper
All dimensions are in millimetres.
The nul

Candidate's Surname
Other Names
Centre Number

3 A pictorial view of a drinking cup and a holder made Trom card is shown to the righ
sit on the base of the card
The drinks tray is made from 4 mm thick card.
(a) Draw to a scale of $1: 2$ in the space below:
(i) a plan view and a front elevation of the drinks tray. Include a symbol to show what angle o orthographic projection you have used; [6] (ii) the centre positions of the six holes with drinking
cup C in position on the plan view;
[15] Cup C in position on the plan view; (iii) drinking cup $\mathbf{C}$ in position on the front
elevation;
$[3]$ (iv) the correct size hole that is needed in the top surface to support the drinking cup in one of the
five remaining positions on the plan view.
(b) In the space indicated, draw a pictorial sketch of a modificacaion to the tray that would make it easier to carry with one hand.


4 Two orthographic views of a house design are given below. The Architect wants a pictorial sketch of the house design to show to clie In the space below the two orthographic views, sketch freehand approximately to the same size as the given views, an isometric view.

Do not include details of the roof tiles.
Windows, doors and shutters should be shown simply and clearly. The starting point $\mathbf{G}$ is given for you.


View from arrow A


Front View

