

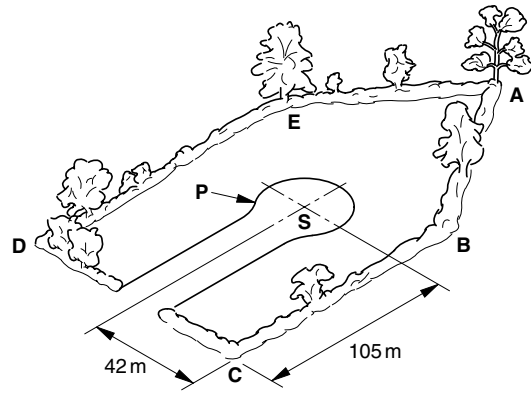
1

The sketch shows a field with a road on which houses are to be built.

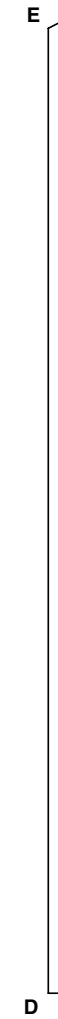
Given that:

- The distance **AB** is 112 metres.
- The distance **BC** is 130 metres.
- The distance **CD** is 102 metres.
- The distance **EA** is 84 metres.
- The distance **EB** is 150 metres.
- The corner **EDC** is 90°
- Radius of arc **P** is 14 metres
- The road is 20 metres wide
- The sides of the road are parallel

The position of **S** is given in the sketch.



- (a) Construct, to a scale of 1:1000, a plan of the field and the road. The side **ED** has been drawn for you. Do not draw the trees and hedges in your answer. [21]
- (b) Use any accurate method to determine the area of the field including the road. [9]

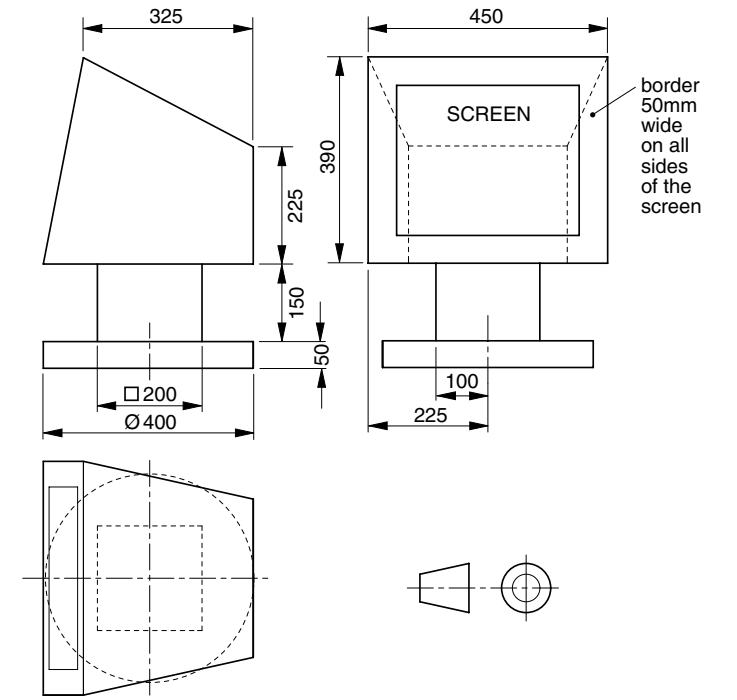


AREA OF FIELD SQUARE METRES

2

Orthographic views of a computer monitor are given to the right. The screen is made from shiny dark grey glass and the other parts of the monitor are made from dull grey plastics.

- (a) Using instruments, draw, to a scale of 1:5, an isometric view of the monitor with the screen to the front. [24]
- (b) Using pencil shading only, render your drawing to represent the materials from which the monitor is made. [6]

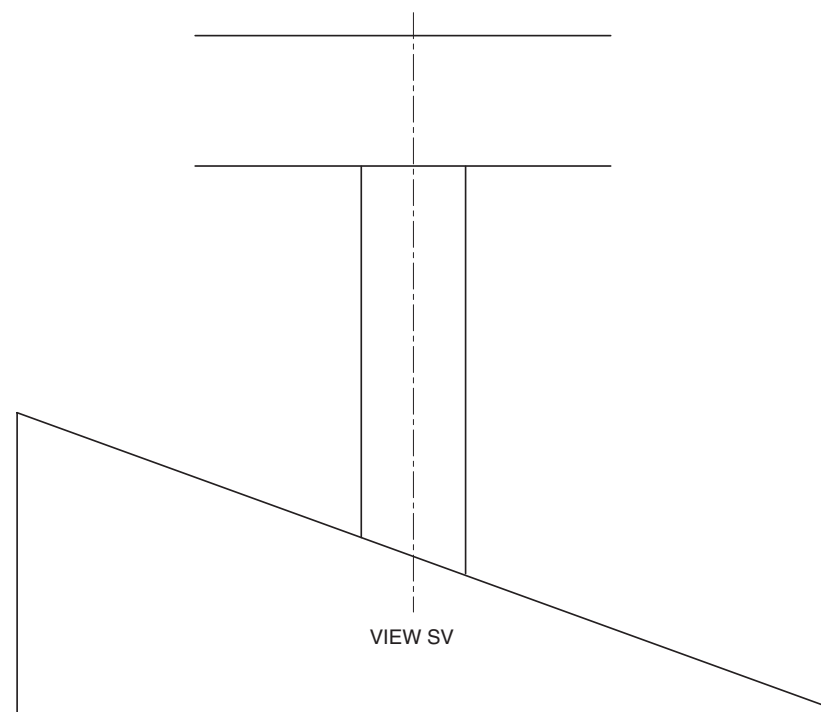
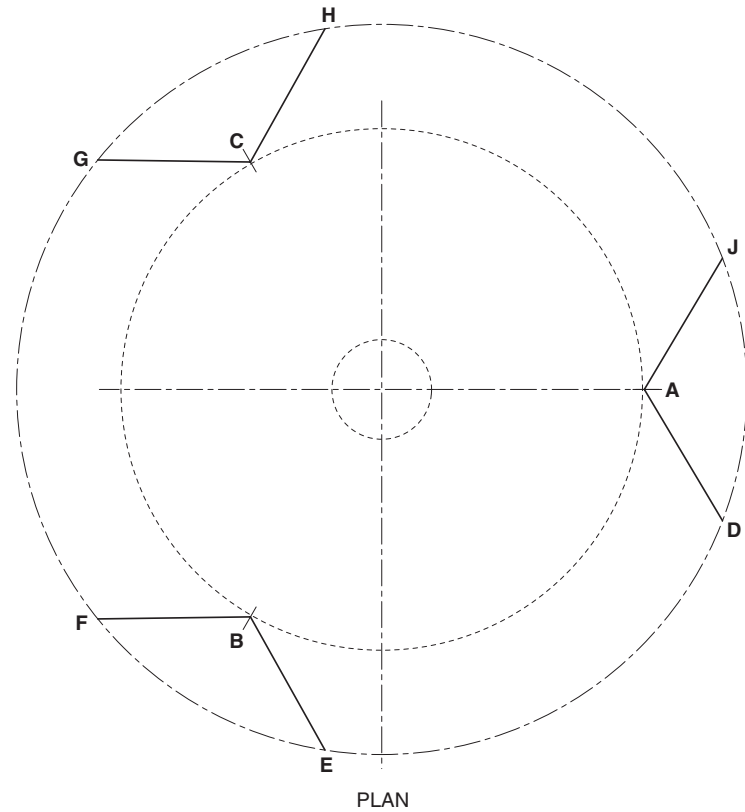
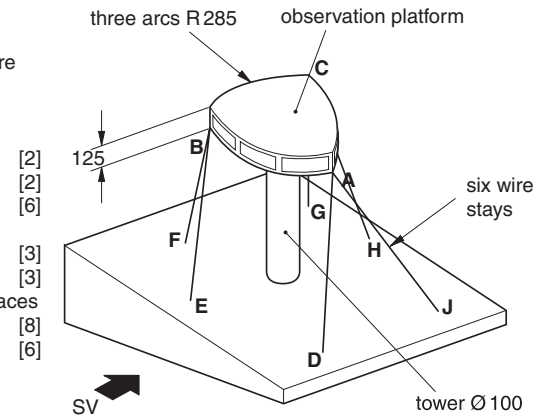


3

An architect's model of an observation platform supported on a cylindrical tower is shown in the sketch to the right. The building is to be situated on the sloping side of a hill, supported by six wire stays.

An incomplete plan and an incomplete side view of the model are given below.

- (a) In the boxes provided:
 (i) draw the symbol for the angle of projection used for the orthographic drawings;
 (ii) give the scale used for the orthographic drawings;
- (b) Complete the plan of the model by constructing the three R285 mm arcs **AB**, **BC** and **CA**.
- (c) Complete the view SV of the building by:
 (i) finishing the outline of the observation platform;
 (ii) drawing the wire stays.
- (d) The model is to be made from thin card. Construct the true shape of **one** of the curved surfaces of the observation platform.
- (e) Determine the true length of the wire stay **AD** and print your answer in the box provided.



(a)(i) Draw the symbol of projection here.

(a)(ii) Give the scale of the drawing here.

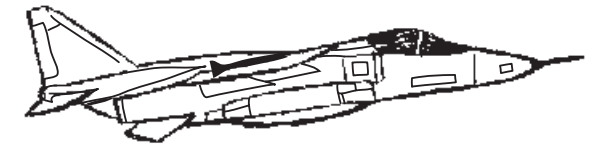
(e) Give the true length of **AD** here.

4

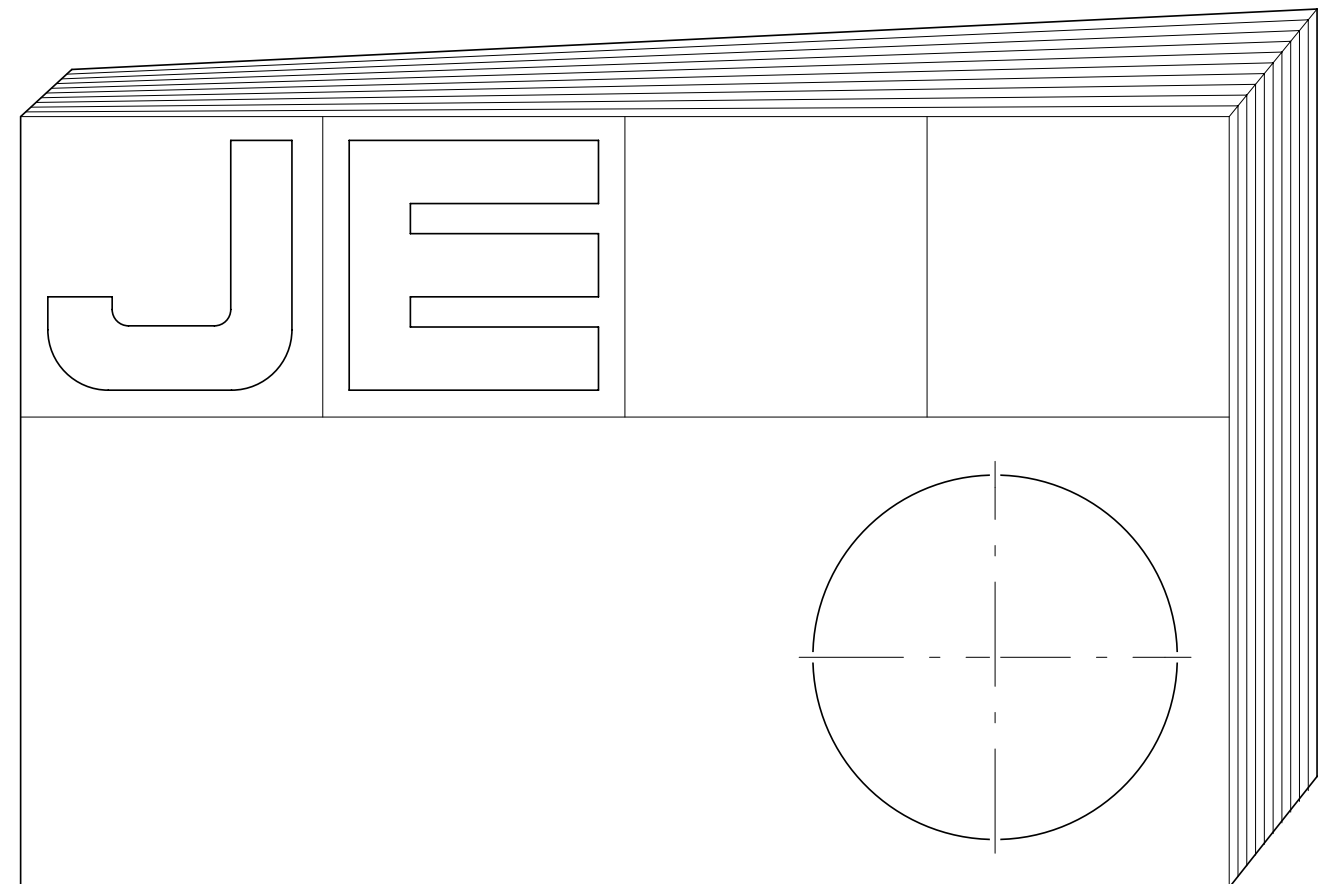
A book about jet fighter planes is to be published by *Star Books*. The title of the book is *JETS*.

An incomplete drawing of the front cover of the book is given below.

- Complete the drawing by:
- (a) drawing the letters **T** and **S** in the given squares. The letters must be similar in design to the given letters **J** and **E**; [8]
- (b) making a **simplified** illustration of a jet fighter in any suitable position on the front cover. A drawing of a jet fighter is given to help you. Marks will be given for design sketches for the illustration; [10]
- (c) drawing a regular five-pointed star inscribed in the circle given in the bottom right hand corner of the cover; [7]
- (d) adding colour and shading to your drawing. You need not colour all the cover, but it must be clear what it will look like when it is finished. [5]



DRAW DESIGN SKETCHES FOR AIRCRAFT HERE



COVER OF BOOK