

SHEET 1
PENANG SANGAM HIGH SCHOOL
YEAR 11
TECHNICAL DRAWING
WORKSHEET – 3

QUESTION 1

Given:

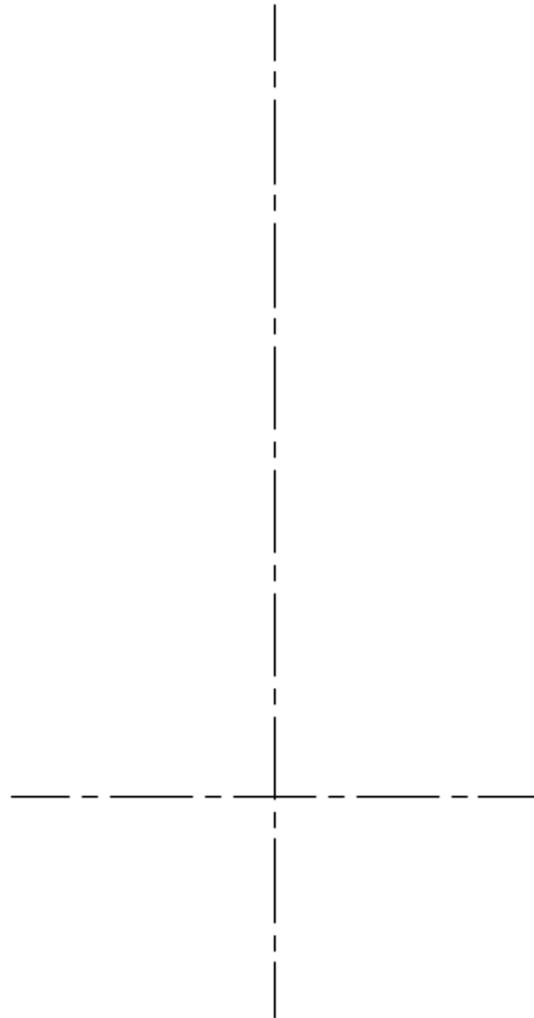
The center line for the construction of a right hand helix.

Required:

(a) Construct a simple right hand helical thread for $1\frac{1}{2}$ revolution the pitch length is 60mm and diameter 50mm **(13 marks)**

(b) What is the pitch angle? _____ **(1 mark)**

(c) What is the true helical length? _____mm **(1 mark)**



QUESTION 2

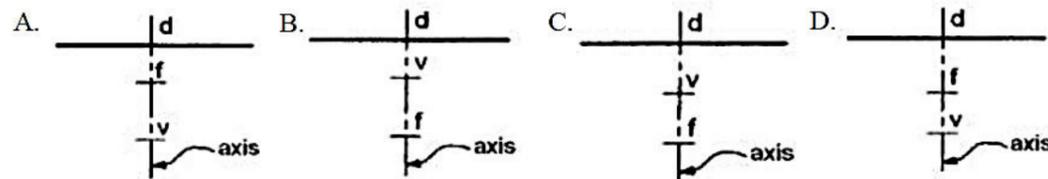
MULTIPLE CHOICE

Circle the correct answer.

- The scale of 2:100 is simplified to
 - 1 : 10.
 - 1 : 20.
 - 1 : 50.
 - 1 : 100.
- The diagram on the right shows a technical drawing instrument. Name the instrument shown.
 - Compass
 - Curve ruler
 - Template rule
 - French curve

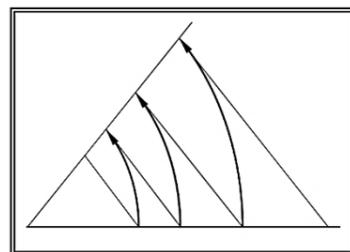


- Which of the following diagrams represents a **hyperbola**?



- texture.
 - harmony.
 - ergonomic.
 - aesthetic.

- The scale given on the right is a
 - cabinet scale.
 - cavalier scale.
 - isometric scale.
 - logarithmic scale.



DESIGN

(20 marks)

Problem:

Almost every family have household pets such as dogs and cats. Dogs are mostly kept outside the house while cats are kept comfortably and safely inside.

Brief: Design a **dog house** which will be affordable.

Specification: The dog house should be:

- cheap;
- portable;
- safe and comfortable;
- made of locally available materials.

Requirements:

- Produce **two** freehand pictorial sketches of the **dog house**. **(8 marks)**
- Evaluate each sketch on the following criteria:
 - materials used.
 - safety. **(4 marks)**
- Explain with the help of sketches how the **dog house** will be mounted to the ground. **(3 marks)**
- Draw a pencil-rendered or a colour-rendered pictorial sketch of the final solution. **(5 marks)**