

SHEET 1
 PENANG SANGAM HIGH SCHOOL
 YEAR 13
 TECHNICAL DRAWING

WORKSHEET – 4

QUESTION 1

Given: The shaft $\varnothing 50\text{mm}$, lead - 40mm

Required:



NOTE

Please note that the **dimensions** on the drawings are given for reference purpose i.e. students can use the given dimensions and redraw on a separate worksheet **if not** then the students can directly do the solution on **this same** drawing question/ sheet.

Q1(i)		
1	Correct pitch	2
Q1(ii)		
1	Correct core	1
2	Correct revolution	1
3	Correct lead	1
4	Correct divisions	1
5	Correct rotation direction	1
6	Linework / outline	2

SANGAM

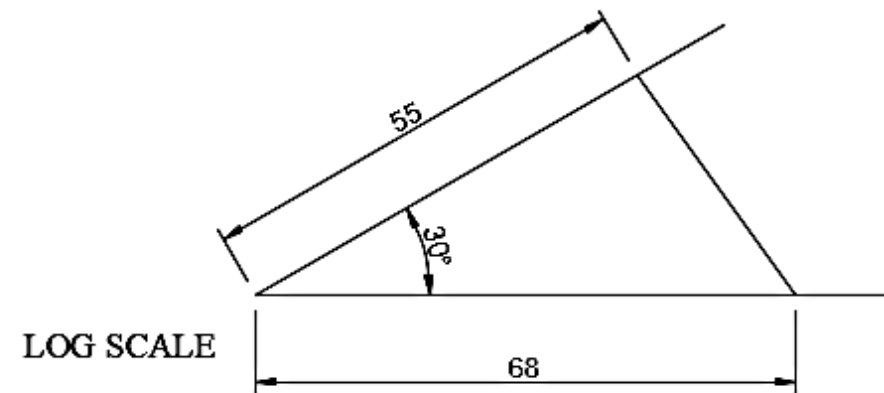
RESOURCES

QUESTION 2

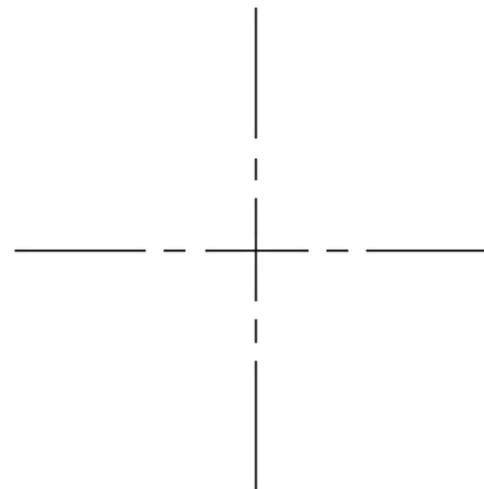
Given: Vector angle 30° , incomplete logarithmic scale till 9th term.

Required: To complete the logarithmic scale to locate the first vector. **(2 marks)**

Draw the clockwise logarithmic spiral. **(4marks)**



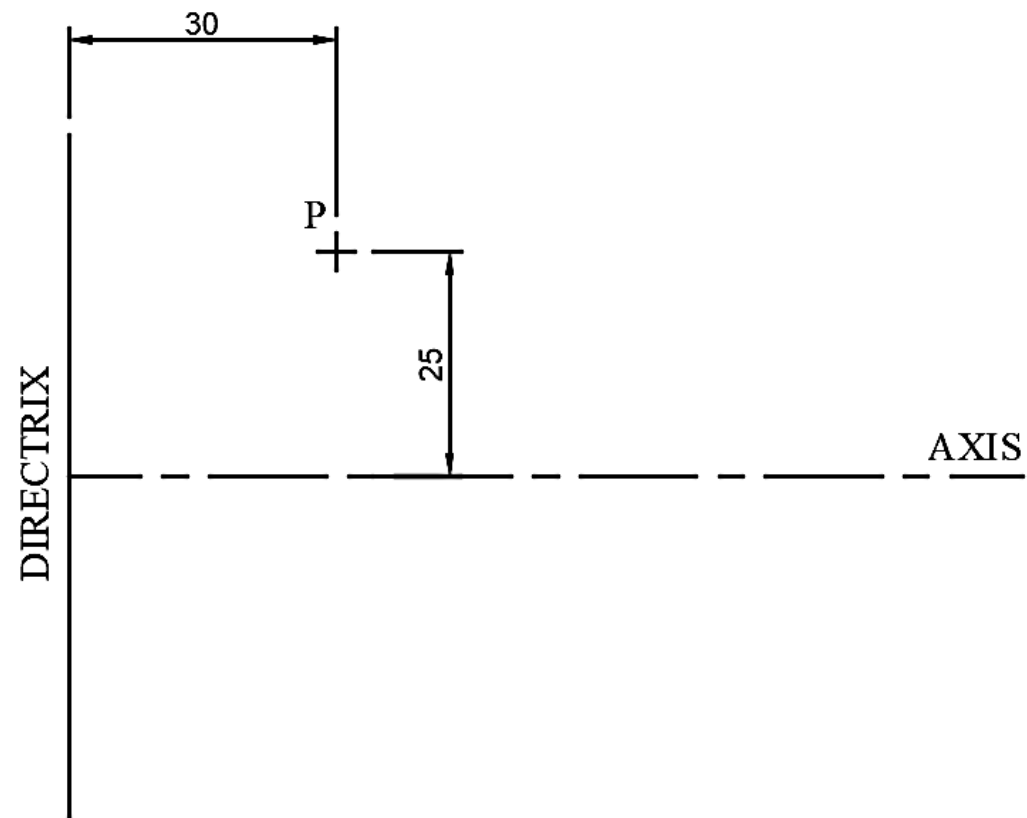
Q2(i)		
1	Correct scale	2
Q2(ii)		
1	Correct division	1
2	Correct points marked	1
3	Correct rotation	1
4	Outline	1



QUESTION 3

Given: The axis, directrix a point 'P' on the curve of a parabola.

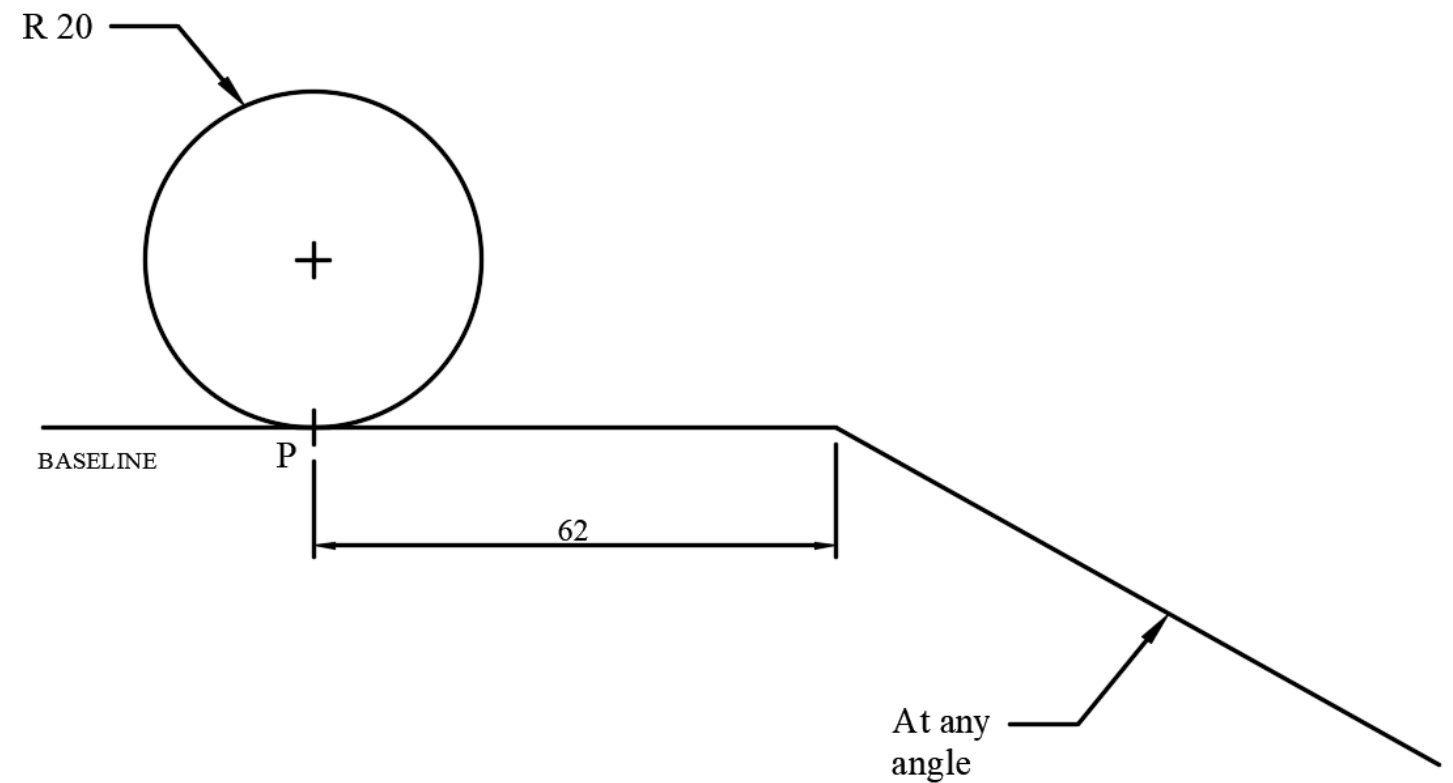
- Required:
- To locate the focus (1 mark)
 - To construct the parabola (2 marks)
 - To draw a tangent at point 'P' (1 mark)
 - To locate the centre of curvature of any 3 points on the curve and draw its evolute. (5 marks)
 - To calculate the ratio of eccentricity (1 mark)



Q3		
1	Correct focus	1
2	Correct parabola	2
3	Correct tangent	1
4	Correct center of curvature	3
5	Correct evolute	2
6	Correct eccentricity ratio	1

QUESTION 4

Given: The base line, a rolling wheel with a point 'P'.
 Required: Construct the path traced by point 'P' for 1 revolution. (5 marks)



Q4		
1	Correct division	1/2
2	Correct centers	1
3	Correct path projected	1
4	Correct revolution	1/2
5	Correct points located	1/2
6	Correct locus	1/2
7	Correct linework	1

NOTE

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SHEET 3

THE END