Construction of Perpendiculars

1.	Ch	oose the correct answer:
	a.	If two lines intersect each other at 90°, then these lines are called:
		i) parallel ii) perpendicular iii) similar
	b.	Two lines are perpendicular, if they intersect each other at:
		i) acute angle ii) right angle iii) obtuse angle
	c.	Line AB perpendicular to l is written as :
		i) $AB = I$ ii) AB and I iii) $AB \perp I$ iv) $AB \mid \mid I$
	d.	A set square which has three different angles at its three edges is:
		i) 30° - 90° - 60° ii) 45° - 90° - 45°
		iii) 0° - 90° - 0° iv) 90°
	e.	It has a definite length:
		i) ray ii) line
		iii) line segment iv) circle
	f.	A perpendicular bisector of a line of 12.5 cm divides the line into:
		i) 6 cm ii) 6.25 cm iii) 5 cm iv) 3 cm

- 2. Draw any line segment AB. Mark any point M on it. Through M, draw a perpendicular to AB using ruler and compasses.
- 3. Draw any line segment CD. Take any point P not on it. Through P, draw a perpendicular to CD using ruler and a set square.
- 4. Draw a line segment PQ of 7 cm. Mark a point T outside this line segment. Draw a line through T perpendicular to PQ using ruler and compasses.

- 5. Draw a line AB and take a point C on it. Using set squares, construct a perpendicular CD on it. Check by using a protractor whether ∠ACD = 90°.
- 6. Draw the perpendicular bisector of PQ whose length is 8.8 cm.
 a. Take any point A on the bisector drawn. Examine whether AP =AQ
- 7. Draw a line segment of length 12.8 cm. Using ruler and compass, divide it into four equal parts. Verify by actual measurement.
- 8. Draw a circle of radius of 2 cm. Draw a diameter AB of the circle. Now construct the perpendicular bisector of the line segment AB. Does it pass through the centre of the circle?
- 9. Draw a circle with centre O and radius 4.5 cm. Draw any chord PQ. Construct the perpendicular bisector of AB and examine if it passes through O.
- 10. Draw a circle of any radius. Draw two chords AB and CD such that AB is not parallel to CD. Now
 - **a.** Draw the perpendicular bisector of the chord AB and CD.
 - **b.** At what point do they intersect?
- 11. Draw any angle with vertex O.Take a point A on one of its arms and B on the another in such a way that OA = OB. Draw the perpendicular bisectors of \overline{OA} and \overline{OB} . Let them intersect at P, is PA = PB?
- 12. Observe the given figure and write the steps of construction which have been followed to draw it. A 3.4 cm

