

2 ELLIPSES

- 1 An ellipse has a major axis of 126 mm and the distance between the foci is 100 mm.

Construct the ellipse using:

- (a) the auxiliary circle method;
 - (b) the circumscribing rectangle method.
- 2 Construct an ellipse having a major axis of 100 mm and a minor axis of 50 mm. At a point P on this ellipse, 35 mm from the minor axis and 20 mm from the major axis construct a tangent PT.
- 3 The minor axis of an ellipse is 101 mm long and the distance between the focal points is 126 mm. Construct geometrically one half of

this ellipse and state the length of the major axis.

- 4 Construct an ellipse given that the distance between the foci is 56 mm and the major axis 75 mm long.
- 5 An elliptic island is to be set out on a roadway. It has a major axis of 4000 mm and a minor axis of 1350 mm. The 250 mm wide curb is to be laid in eight sections, the joints being normal with the outer curve. To a suitable scale draw a plan of the island.
- 6 An elliptical hole is required in the side of a tank to fit a hose connector. The major axis is 125 mm and the minor axis is 76 mm. Construct the elliptical hole using any method with which you are familiar.