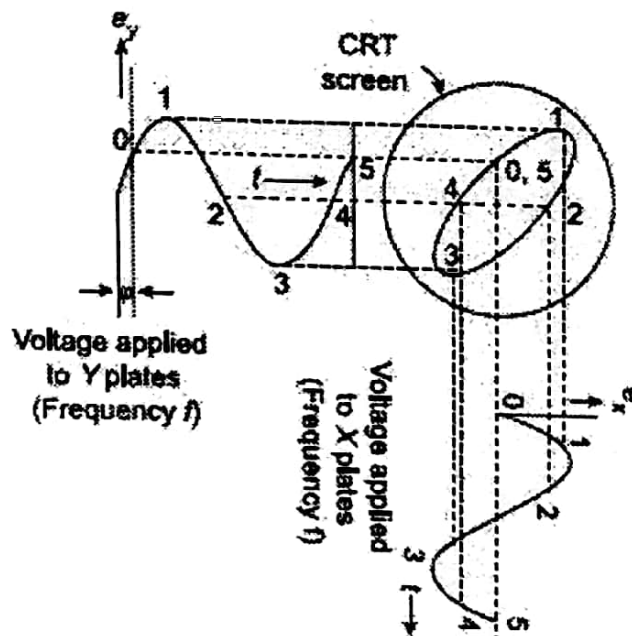**Figure 3.18 Determination of angle of phase shift**

Lissajous pattern with two equal voltages of same frequency and phase shift of Φ

sinusoidal waveforms of the same frequency produce a pattern which may be a straight line, a circle or an ellipse upon the phase and the magnitude of the voltages.
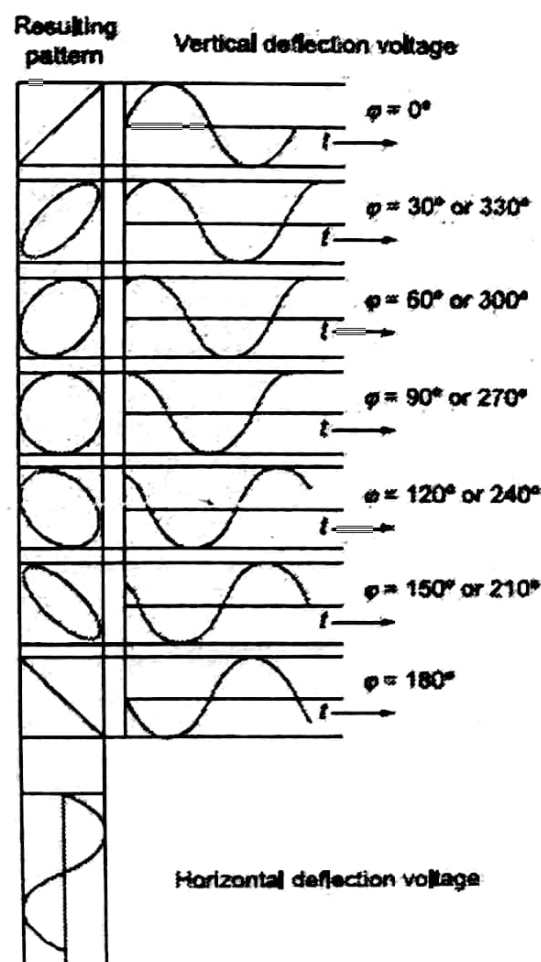

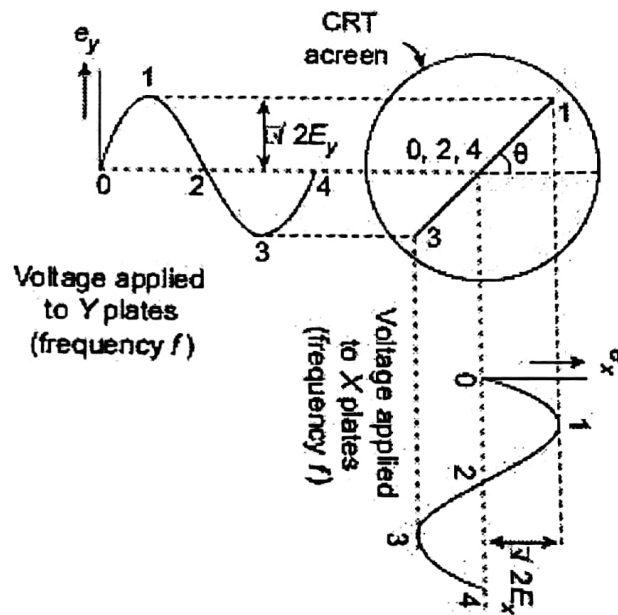**Figure 3.17 Lissajous pattern with different phase shift**

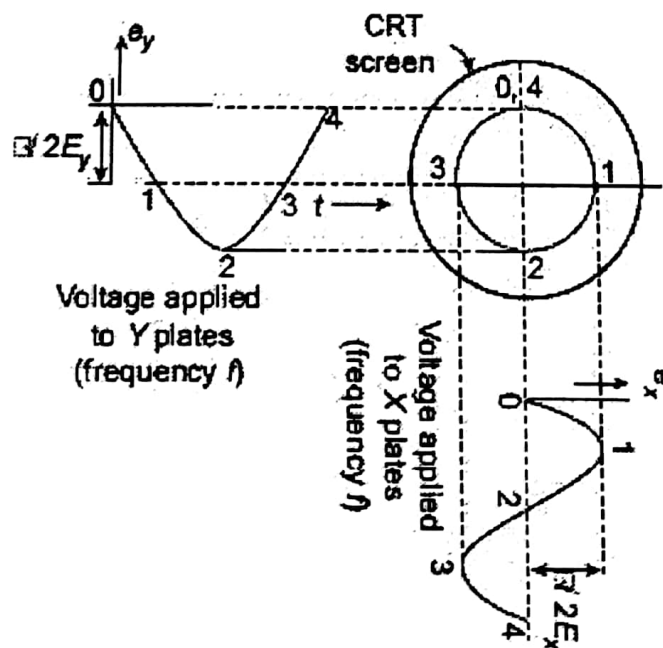**Figure 3.14 Lissajous pattern with equal frequency voltages and zero phase shift**
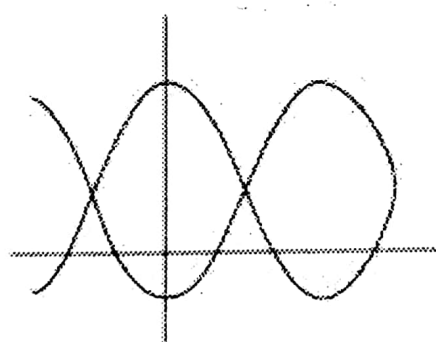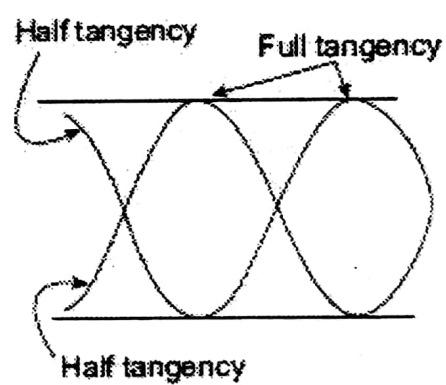

Figure 3.15 Lissajous pattern with equal voltages and a phase shift of 90°
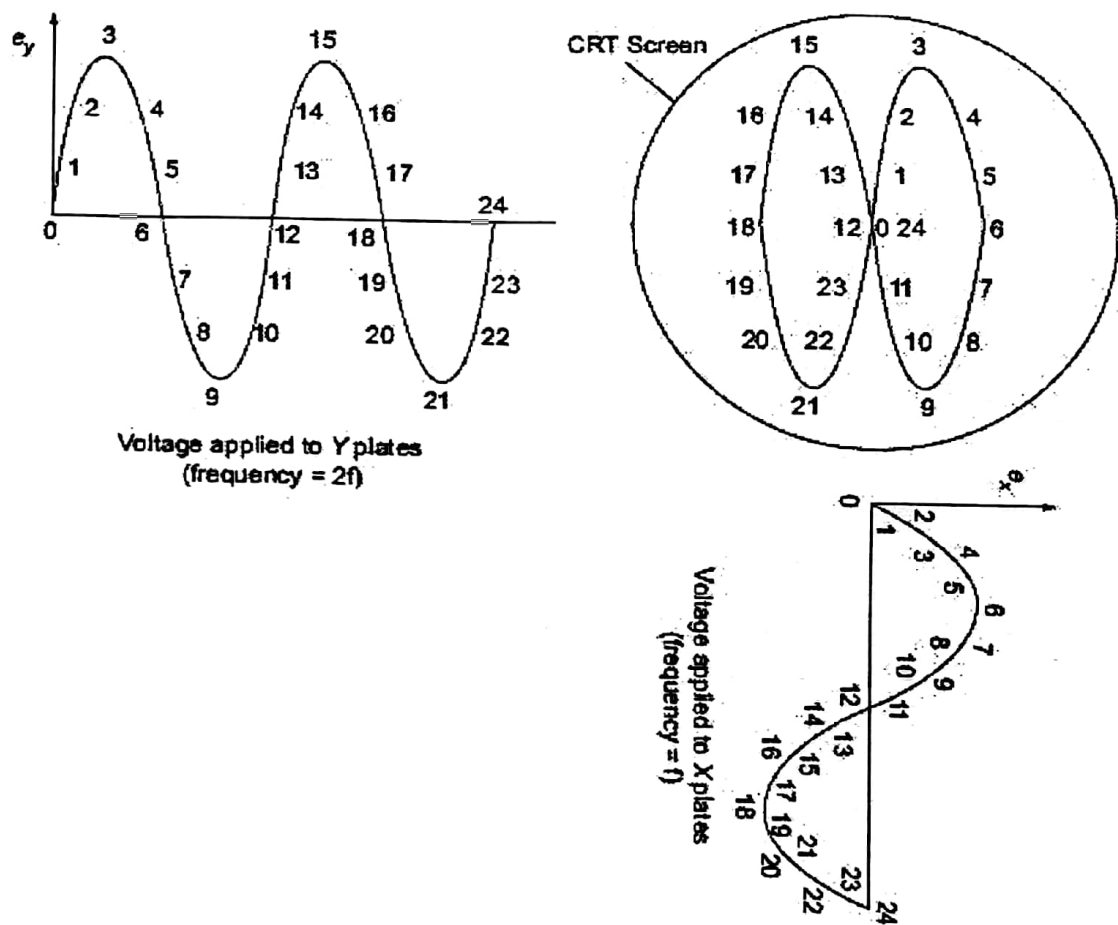
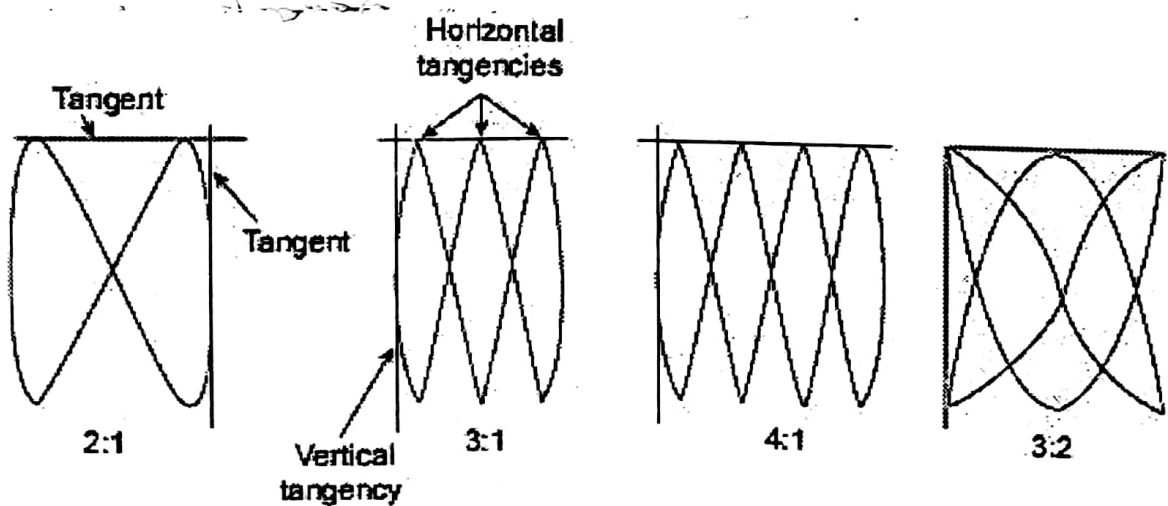(a)

(b)

Figure 3.11 Lissajous pattern with frequency ratio 2:1

Figure 3.12 Lissajous patterns with different frequency ratio