

This is only an approximation and its derivation is such that it only follows for small angles.

$$w = \frac{\lambda D}{s}$$

Where w = distance between two fringes

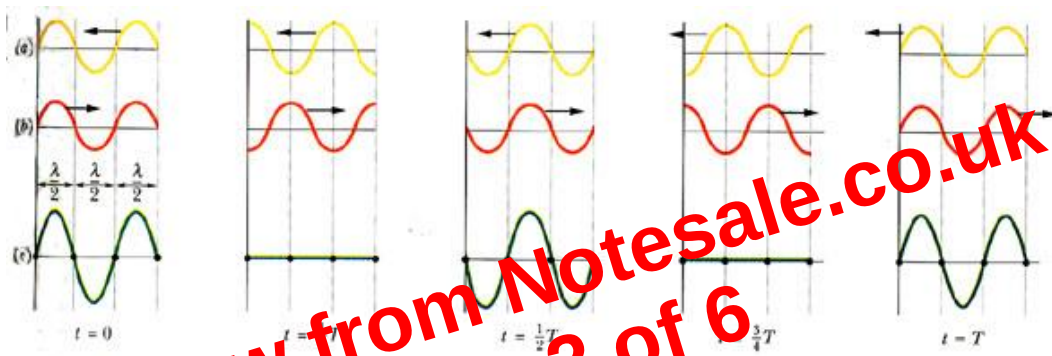
D = distance from slits to screen

s = slit spacing

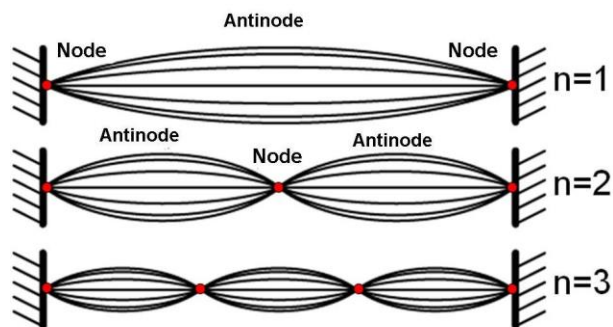
Stationary Waves

A stationary wave is formed by the superposition of two progressive waves of the same frequency and amplitude travelling in opposite directions.

Formation of standing wave;



Nodes and Antinodes



Nodes are separated by half a wavelength, as are antinodes. The amplitude of the peak or trough is double the amplitude of the two progressive waves.

Harmonics

A harmonic is a mode of vibration that is a multiple of the first harmonic.