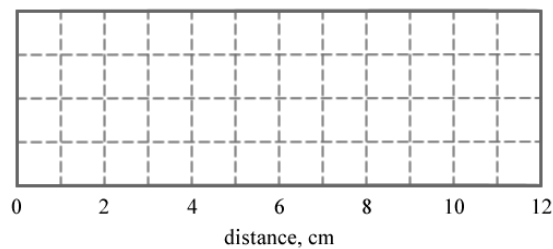
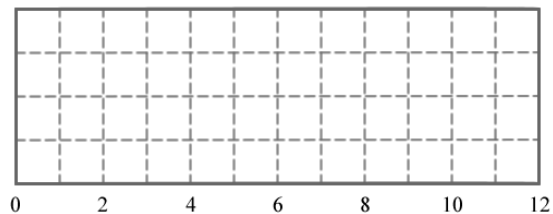
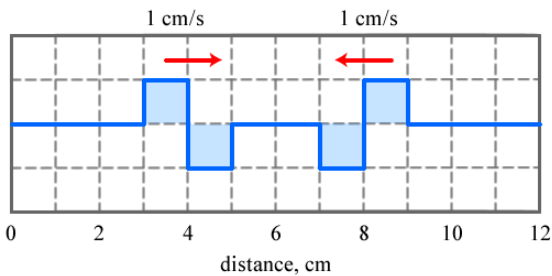
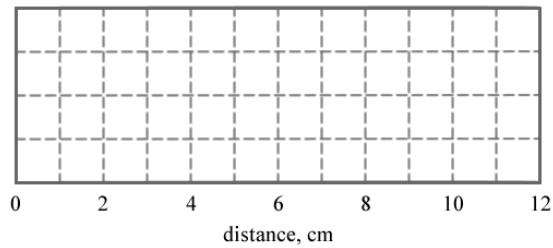
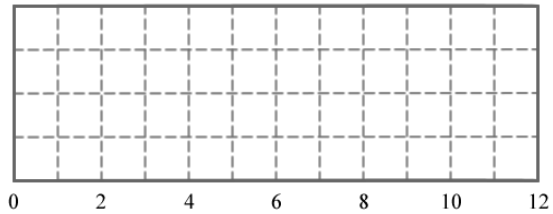
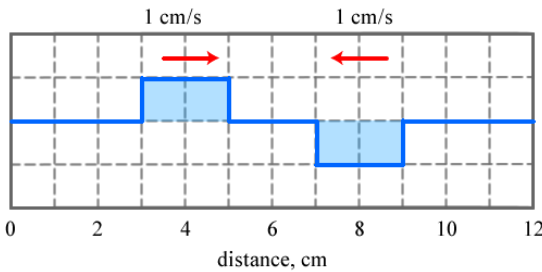
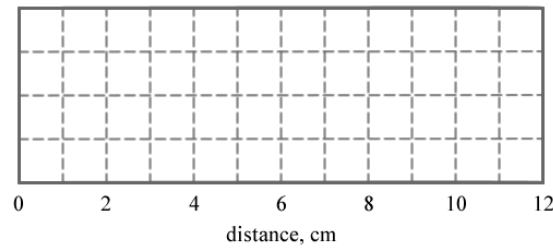
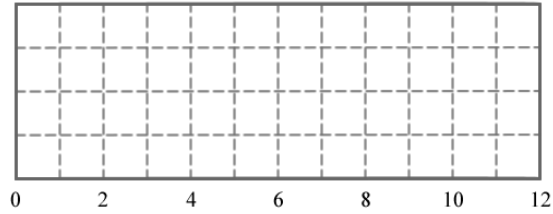
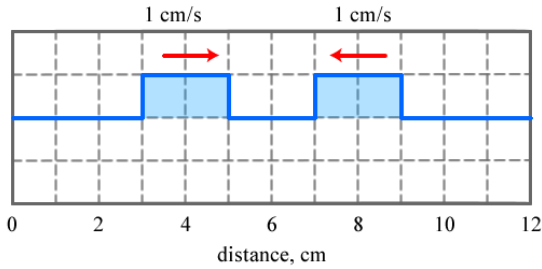


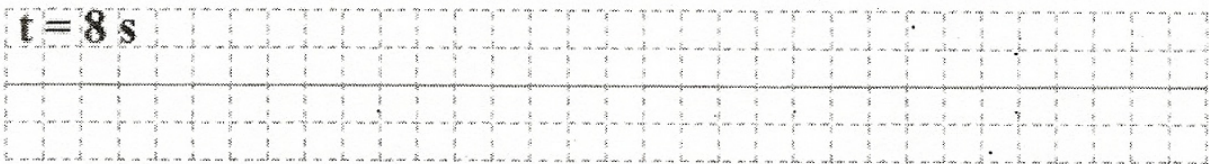
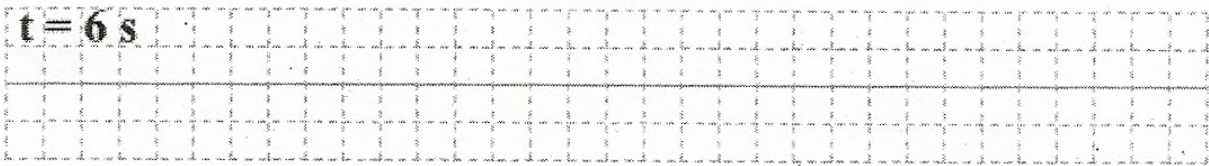
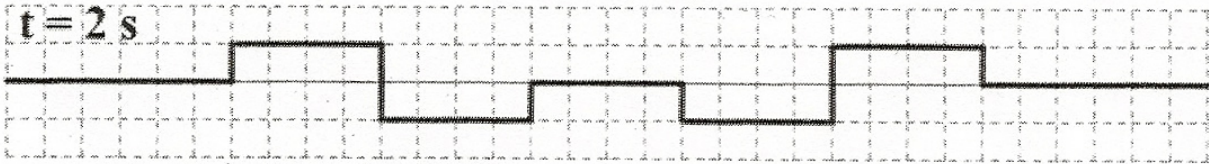
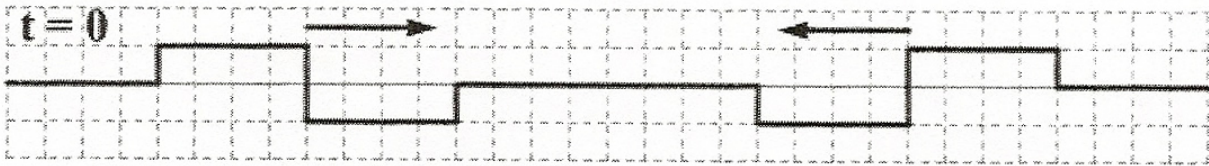
Interference and Linear Superposition

The principle of superposition: when two waves meet one another the net displacement of the medium at a particular point equals the sum of the displacements of the waves at that point. In the situations below, sketch the shape of the medium when the wave pulses are

- (a) $\frac{1}{2}$ on top of each other
- (b) Completely on top of each other



Consider two pulses propagating in opposite directions along a string. The picture shows the profile of the string at $t = 0$ and at $t = 2$ seconds. Draw the profile of the string at $t = 6$ and $t = 8$ seconds.



This is the same situation as above, except that the pulse traveling to the left has been inverted. The picture shows the situation at $t = 0$ s. Draw the profile of the string at $t = 5$, $t = 6$ and $t = 8$ seconds.

