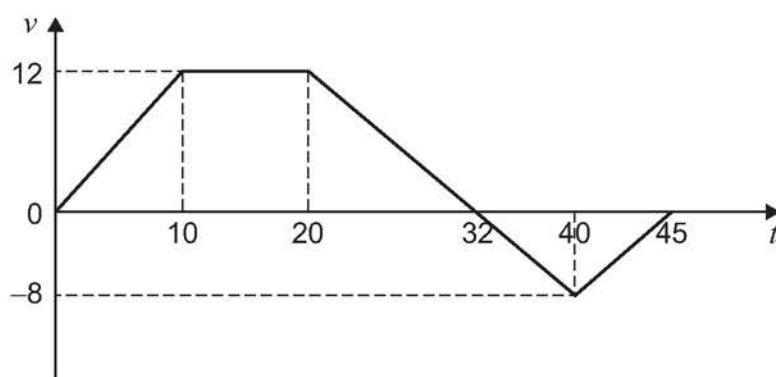**13** A car, initially at rest, is driven along a straight horizontal road.

The graph below is a simple model of how the car's velocity, v metres per second, changes with respect to time, t seconds.

13 (a) Find the displacement of the car when $t = 45$

[3 marks]

13 (b) Shona says:

"This model is too simple. It is unrealistic to assume that the car will instantaneously change its acceleration."

On the axes below sketch a graph, for the first 10 seconds of the journey, which would represent a more realistic model.

[2 marks]