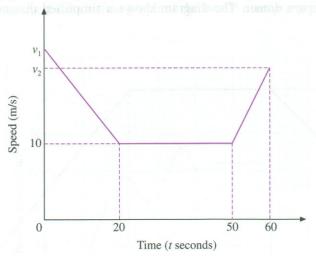**25.** The diagram shows the speed-time graph of a motorcyclist during a 60-second interval of a journey.

Time (t seconds)

(a) Find the value of v_1 if the deceleration of the motorcyclist in the first 20 seconds is 0.75 m/s².

(b) Find the value of v_2 if the average speed of the motorcyclist in the last 30 seconds is 12 m/s.

(c) Find the total time for which the speed of the motorcyclist is less than or equal to 15 m/s.

(d) Sketch the distance-time graph of the motorcyclist during the 60-second period on the diagram below.

Time (seconds)