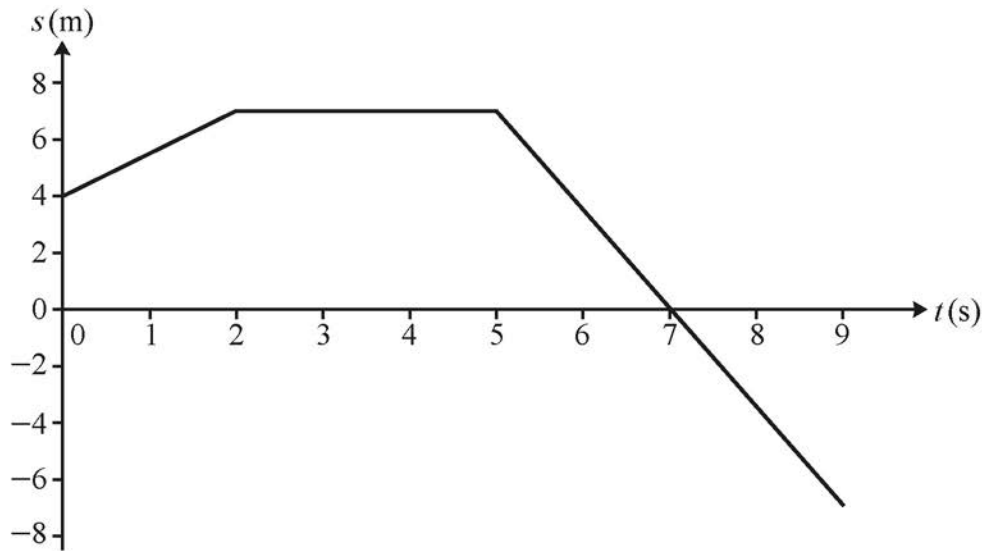


- 5 The graph shows displacement  $s$  m against time  $t$  s for a model of the motion of a bead moving along a straight wire. The points  $(0, 4)$ ,  $(2, 7)$ ,  $(5, 7)$  and  $(9, -7)$  are the endpoints of the line segments.



- (a) Find an expression for the displacement of the bead for  $0 \leq t \leq 2$ . [2]
- (b) Sketch the velocity-time graph for this model. [2]
- (c) Explain why the model may not be suitable at  $t = 2$  and  $t = 5$ . [1]