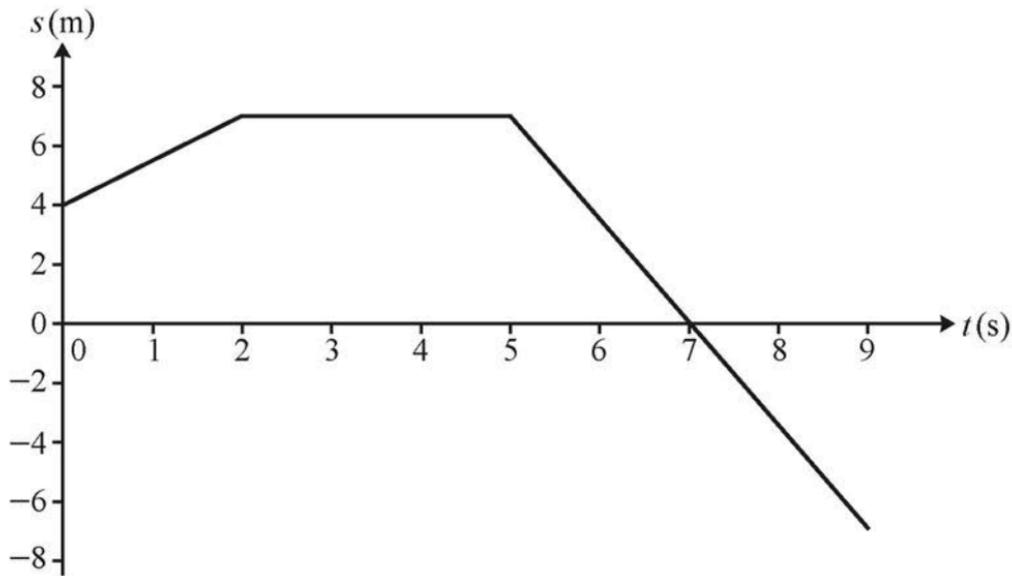


- 5 The graph shows displacement s m against time t s for a model of the motion of a bead moving along a straight wire. The points $(0, 4)$, $(2, 7)$, $(5, 7)$ and $(9, -7)$ are the endpoints of the line segments.



- (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]