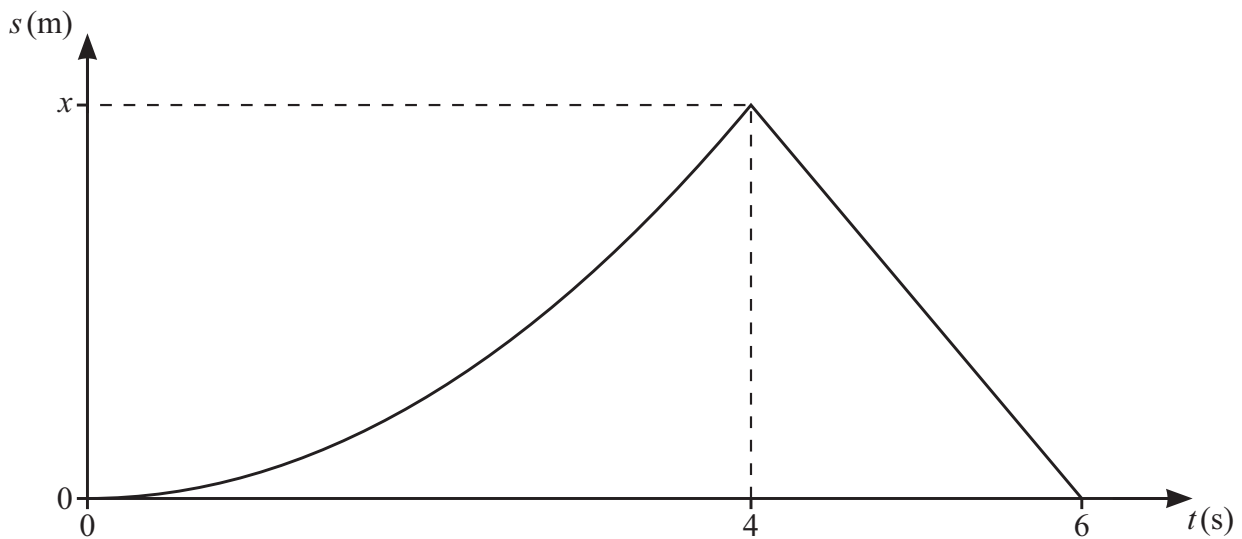


1



The diagram shows the displacement-time graph for the motion of a particle. The particle starts from rest at a point O and travels with constant acceleration $a \text{ m s}^{-2}$, taking 4 s to move a distance of $x \text{ m}$. The particle then returns to O with constant speed of 40 m s^{-1} , over a period of 2 s.

Find the value of x and the value of a .

[3]

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. There are no margins, text, or other markings on the paper.