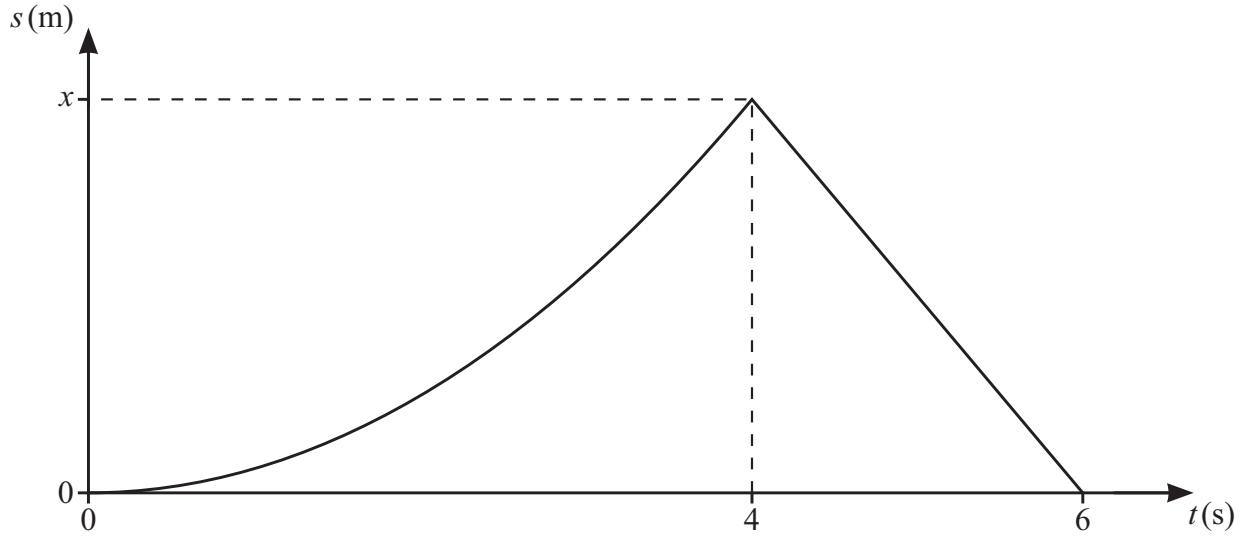
1



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 $a\,\mathrm{m\,s^{-2}}$, taking 4 s to move a distance of x m. The particle then returns to O with constant speed of $40\,\mathrm{m\,s^{-1}}$, over a period of 2 s.

Find the value of x and the value of a. [3]

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