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2. A car moves along a straight horizontal road with constant acceleration $a\,\text{m s}^{-2}$ where $a > 0$

The car is modelled as a particle.

At time $t = 0$, the car passes point A and is moving with speed $u\,\text{m s}^{-1}$

In the first three seconds after passing A the car travels 20 m.

In the fourth second after passing A the car travels 10 m.

The speed of the car as it passes point B is $20\,\text{m s}^{-1}$

Find the time taken for the car to travel from A to B.

(8)

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Q2

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