

9 A sprinter runs a 100 m race in a straight line. He accelerates from the starting block at a constant acceleration of 2.5 ms^{-2} to reach his maximum speed of 10 ms^{-1} . He maintains this speed until he crosses the finish line.

Which time does it take the sprinter to run the race?

A 4 s

B 10 s

C 12 s

D 20 s

10 A firework rocket is fired vertically upwards. The fuel burns and produces a constant upwards