

6 A sprinter takes a time of 11.0 s to run a 100 m race. She first accelerates uniformly from rest, reaching a speed of 10 ms^{-1} . She then runs at a constant speed of 10 ms^{-1} until the finish line.

What is the uniform acceleration of the sprinter for the first part of the race?

A 0.5 ms^{-2}

B 0.91 ms^{-2}

C 1.7 ms^{-2}

D 5.0 ms^{-2}