Question 2

A particle of mass m kg slides from rest down a smooth inclined plane, and travels a distance of S metres down the plane in a time of T_1 seconds. Another particle of mass $2m$ kg is placed on the same plane and travels a distance of $2S$ metres down the plane in a time of T_2, seconds, then

A. $T_2 = 4T_1$

B. $T_2 = 2T_1$

C. $T_2 = T_1$

D. $T_2 = \dfrac{T_1}{2}$

E. $T_2 = \sqrt{2}\,T_1$