Answer on Question #38572, Physics, Electric Circuits

For an accelerated motion, velocity as a function of time is $v(t)=v_0+at$, where v_0 is the initial velocity and a is the acceleration. Knowing that initial velocity is zero, obtain $v(t)=at$. Also, knowing velocity at $t=1.25s$, obtain $10\frac{m}{s}=a\cdot 1.25\Rightarrow a=\frac{10\frac{m}{s}}{1.25\,s}=8\frac{m}{s^2}$ - this is the acceleration of the Olympic gold medalist.

Knowing the acceleration, it is easy to find distance, covered in 1.25s : $S=\frac{at^2}{2}=\frac{8\cdot(1.25)^2}{2}=6.25m$.