A group of muons is observed to pass a balloon at a height of 480 meters above the Earth's surface. The muons move at a speed of $\frac{4}{5}c$ straight down towards the Earth's surface.

(a) Calculate the time for the muons to travel from the balloon to the Earth's surface as determined by an observer on the Earth.
(b) Calculate the time for the muons to travel from the balloon to the Earth's surface as determined by an observer moving with the muons. Explain your reasoning.

(c) Stationary muons decay as shown in the figure above. Assume $N_0$ muons pass the balloon at time $t = 0$ and determine the number that reach the Earth's surface. Give reasons for your answer.