Mike runs up a flight of steps to determine his power output. He is 87kg. and maintains a constant speed while he climbs 1.75m in 1.17s What is MIke's power output (in watts)?

$P = ?$ $P = \frac{W}{\Delta t} = \frac{?}{1.17s}$

$U_0 + K_0 + W = U_f + K_f$

$K_0 = K_f$

$mgh_0 + W = mgh_f$

$0 + W = mgh_f$

$W = (87)(9.8)1.75$

$= 1492J$

$P = \frac{1492J}{1.17s} = 1275W$

# *Power Lab*

***Objective:  Determine your power output (in watts, AND horsepower) while briskly climbing a flight of stairs.***

***"Report":  Write a word problem, solve the word problem.***