



4. The 2004 Tour de France's Alpe d'Huez time trial stage was a steep climb with its finish 1200 m higher than the start. Lance Armstrong won with a time  $\Delta t$  of 39:41 (2381 s). He and his gear had a combined mass of 84 kg.

a. What work did Lance do against gravity over the stage?

b. What was Lance's average power during the stage?

5. Show that the units of work/time are the same as the units of force·velocity.