## The Runner \& The Bird

A marathon runner runs at a steady $15 \mathrm{~km} / \mathrm{hr}$. When the runner is 7.5 km from the finish, a bird begins flying from the runner to the finish at $30 \mathrm{~km} / \mathrm{hr}$. When the bird reaches the finish line, it turns around and flies back to the runner, and then turns around again, repeating the back-and-forth trips until the runner reaches
 the finish line. How many
D. 30 km kilometers does the bird travel? More Time

## Instantaneous Velocity

Is it possible to directly measure the instantaneous velocity?
A. Yes
B. No (I think, but ...)
C. I'm Not Sure

## You Are Standing on the Edge of a Cliff

You throw a ball straight up and another ball straight down with the same initial speeds. Neglect air resistance. When the balls hit the ground, which one has the greater speed?
A. The one thrown upward.
B. The one thrown downward.
C. They hit the ground with the same speed.

