Chapter 2 Problem 25 [†]

Given
$t = 1.12\ s$
$v = 11.0\ m/s$
Comes to a stop in $0.131\ s$

Solution
Find the acceleration while falling and deceleration while stopping.

While falling the acceleration is

$$\bar{a} = \frac{\Delta v}{\Delta t} = \frac{v_f - v_i}{t_f - t_i} = \frac{11.0\ m/s - 0\ m/s}{1.12\ s - 0\ s} = 9.82\ m/s^2$$

While stopping the acceleration is

$$\bar{a} = \frac{\Delta v}{\Delta t} = \frac{v_f - v_i}{t_f - t_i} = \frac{0\ m/s - 11.0\ m/s}{0.131\ s - 0\ s} = -84.0\ m/s^2$$

The negative sign indicates that the egg is slowing down or decelerating.

[†]Problem from Essential University Physics, Wolfson