

PHYS 1403
Pretest 3

1) Two balls of the same size are released from the same height at the same time. Ball 1 is simply dropped. (Its initial velocity is zero.) Ball 2 has an initial velocity, v , **parallel** to the ground.

Consider each of the following cases:

a) The balls each have the same mass. Which ball will hit the ground first? Explain your reasoning.

b) Ball 1 has mass $m_1 = 5\text{kg}$. Ball 2 has mass $m_2 = 7\text{kg}$. Which ball will hit the ground first? Explain your reasoning.

c) Ball 1 has mass $m_1 = 7\text{kg}$. Ball 2 has mass $m_2 = 5\text{kg}$. Which ball will hit the ground first? Explain your reasoning.