Phys 201A

Homework 4 – Due Tuesday, October 20, 2009

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Problems 9, 11, 15, 17, 21, 23, 28, 31, 32, 40, 47, 60, 64, 65

Answers to even-numbered problems:

28a) $v = |v_{2y}| = \sqrt{(-v_{1y})^2 - 2g\,\Delta y} = \sqrt{v_{1y}^2 + 2gh}$.

b) $\Delta t = \dfrac{\sqrt{v_{1y}^2 + 2gh} - v_{1y}}{g}$ .thrown down

$\Delta t = \dfrac{\sqrt{v_{1y}^2 + 2gh} + v_{1y}}{g}$. thrown upward.

32a) 3.86 m/s, 350 m/s

32b) 82 ms.

40a) 8.85 m/s

40b) 1.0m above point B.