

To resubmit Problems 5-7 for Exam 2, submit your solutions to the problems below instead.

For Problems 5-7, consider the following setting.

Eli Manning throws a football at an angle of 32° to the horizontal. It leaves his hand 2 m above the ground. The football lands 40 m from him. Use $g = 9.8\text{m/s}^2$.

Problem 5. Find (i) the time t at which the ball lands and (ii) the initial speed of the ball v_0 .

Problem 6. Using your answers to Problem 5, how far is the ball horizontally from Eli 0.5 s after he threw the ball?

Problem 7. Using your answers to Problem 5, how far is the ball vertically from Eli 1 s after he threw the ball?