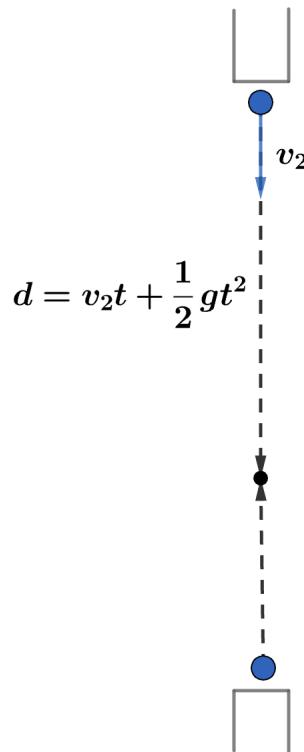


2012 F=ma Exam: Problem 7

Kevin S. Huang



Since we found in the previous problem that the projectiles collide after time $t = 2.5\text{ s}$, the top projectile moves down by a distance

$$d = v_2 t + \frac{1}{2} g t^2 = (55\text{ m/s})(2.5\text{ s}) + \frac{1}{2}(10\text{ m/s}^2)(2.5\text{ s})^2 = 170\text{ m}$$

so the answer is E.