

4. (a) 80 ft/sec

(b) 0.13 sec

5.(a) $g(2) = 2$, $g(4) = 2 - \frac{\pi}{2}$, $g(5) = 3 - \frac{\pi}{2}$, $g(6) = 5 - \frac{\pi}{2}$, $g(6.1) = 5.2 - \frac{\pi}{2}$

(b) $f'(6) = 0$, $g'(6) = 2$

(c) $f'(3) = 0$, $g'(3) = -1$

(d) $x = 2$

(e) $x = 4$

6. init. velocity = -38 ft/sec init. position = 590 ft

7. 1032 ft

8. (a) 64 ft/sec

(b) 64 ft, above

(c) 0 ft

(d) total distance = 168 ft

(e) 0 ft