

Math 124 Homework (winter/spring) #3 Answers

4. (1) x, (2) v, (3) u, (4) t, (5) a, (6) o, (7) q, (8) h, (9) n, (10) f,
(11) d, (12) m, (13) i, (14) k.

5. (a) $P(0) = (0, 6)$.

(b) $(67.002, 0)$, $t = 2.316$.

(c) $x'(t) = 28.925$, $y'(t) = -32t + 34.472$.

(d) $t_0 = 1.077$, $(31.159, 24.5675)$.

(e) -39.64 .

6. (a) $x'(t) = 100 \cos(\theta)$, $y'(t) = -32t + 100 \sin(\theta)$.

(b) $t = \frac{25}{8} \sin(\theta)$.

(c) $\theta_{max} = \sin^{-1}(0.4) = 23.58^\circ$.