

Math 120 - Autumn 2008
Final Exam
December 6, 2008
Answers

1. (a) 20.45 sec. (b) 68.91611 feet

2. 70.17857 inches

3. (a) 15.1294 days (b) 26.25 days (c)

$$\text{stock value} = \begin{cases} 2 \left(\frac{5}{2}\right)^{x/10} & \text{if } 0 \leq x \leq 20; \\ -2(x - 20) + 12.5 & \text{if } 20 \leq x \leq 26.25 \end{cases}$$

4. 1.585102 hours

5. 39.5519915678 hours

6. (a) distance = $\sqrt{(-60 + 2.386295t)^2 + (1.8181296t)^2}$ (b) $t = 4.4691$ and $t = 27.3481$ seconds

7. (a) $r = 4.8623\dots$ (b) The radius should be zero.