

Math 120 - Autumn 2009
Final Exam
December 12, 2009
Answers

1. 62.69 days

2. 17.6 feet

3.

$$\text{area} = \begin{cases} 6x & \text{if } 0 \leq x \leq 8, \\ 48 + \frac{1}{2}(x-8)(6-3(x-10)) & \text{if } 8 \leq x \leq 10 \end{cases}$$

4. (a) $h^{-1}(x) = 5 - \frac{1}{2}\sqrt{x+3}$ (b) $x = 7.5$

5. (a) $x = -10 + 3t, y = 1.5t$ (b) $x = 1 - 4.8t, y = 3.6t$ (c) 1.31 seconds

6. 277.62 feet

7. 190.675 meters

8. 2.0285 hours