Math 120 - Autumn 2013
Final Exam
December 7, 2013
Answers

1. (b) $(2.8, 2.4)$

2. (a) $d(x) = -8x + 92$ (b) $p(x) = -8x^2 + 92x$ (c) \$5.75

3. (a) $f(t) = \dfrac{40t + 560}{t + 3}$ (b) 40 kernels

4. (a) 56.2321 feet (b) 8.7115 feet

5. (a) 7.78097245 m/sec (b) Alex is farther south.

6. (a) $j(t) = 50 + 50\sin\left(\dfrac{2\pi}{600}(t - 150)\right)$ (b) 432.109 days

7. (a) $x = 2 + \dfrac{9}{2}t, y = 10 - \dfrac{13}{4}t$ (b) $x = -5 + 3.6t, y = -5 + 4.8t$ (c) The bison crosses first.

8. (a) $x = -\dfrac{17}{6}$ (b) $j^{-1}(x) = \dfrac{x - 12}{3}$ (c) $x = \dfrac{6\ln 3 + \ln 2}{3\ln 2 - 2\ln 3}$