

Math 120 A - Autumn 2014  
Mid-Term Exam Number Two  
November 13, 2014  
Answers

There were two versions of the exam.

Version A: In problem 1, there are 10000 monkeys on the island in 1930.

1. 97.5882 years after 1930.
2. (a) 150 meters wide and 450 meters long (b) 67500 square meters
3.  $30.\bar{6}$  hours
4. (a)  $x = 0$  and  $x = 4$  (b)  $j^{-1}(x) = 2 - \sqrt{\frac{5+x}{3}}$  (c)  $x = -3$  and  $x = -1$

Version B: In problem 1, there are 5000 monkeys on the island in 1920.

1. 101.1756 years after 1920
2. (a) 105 meters wide and 420 meters long (b) 44100 square meters
3.  $51.\bar{3}$  hours
4. (a)  $x = 0$  and  $x = \frac{25}{4}$  (b)  $j^{-1}(x) = -7 - \sqrt{\frac{109+x}{2}}$  (c)  $x = 7/3$  and  $x = 11/3$