

Math 120 A, B Winter 2013  
Mid-Term Exam Number Two  
February 28, 2013  
Answers

There were two versions of the exam.

Version A - In problem 1, Robert walks 3 km/hr.

1. 1.14588 hours after 7 AM
2. 426.4328 years
3. (a)  $f(10) = 4.9277\dots$  (b) 0.036038... and 3.963961...
4. (a)  $f(x) = -4 + \sqrt{x-3} + \sqrt{x-4}$  (b)  $f^{-1}(x) = 3 + \left(\frac{-1 - (x+4)^2}{-2(x+4)}\right)^2$

Version B - In problem 1, Robert walks 2 km/hr.

1. 1.69371 hours after 7 AM
2. 182.128 years
3. (a)  $f(15) = 6.181818\dots$  (b) 0.13648... and 5.8635...
4. (a)  $f(x) = -1 + \sqrt{x+2} + \sqrt{x+1}$  (b)  $f^{-1}(x) = -2 + \left(\frac{-1 - (x+1)^2}{-2(x+1)}\right)^2$