

Math 120 A Autumn 2011
Mid-Term Exam Number One
October 20, 2011
Answers

There were two versions of the exam.

Version A

In version A, in problem 1, Maggie moves at 6 meters per second.

1. (a) $x = 12 - 5.6921t, y = 3 - 1.8974t$ (b) $D = \sqrt{(12 - 5.6921t)^2 + (3 - 1.8974t)^2}$
2. 5.2154 seconds
3. (a) $f(7) = 10.8$ (b) The smallest value is $f(12) = 3.46666$.
4. $x = -24$ is the only solution.

Version B

In version B, in problem 1, Maggie moves at 8 meters per second.

1. (a) $x = 15 - 7.4278t, y = 7 - 2.9711t$ (b) $D = \sqrt{(15 - 7.4278t)^2 + (7 - 2.9711t)^2}$
2. 8.61125 seconds
3. (a) 14.8 (b) The largest value is $f(-1) = 64.66666$.
4. 8.4 is the only solution.