Math 120 A - Winter 2008
Mid-Term Exam Number Two
February 28, 2008
Answers

There were two versions of the exam.

Version A: In problem 1, Paolo runs at 3 meters per second.

1. 256.0182 m

2. 22.63158 feet

3. (a) 29.064178 cm (b) 3.74501, 16.25498, 21.74501

4. (a)
$$h(x) = \begin{cases} 7 - \frac{1}{2}x & \text{if } x \leq -1, \\ 5 - \frac{5}{2}x & \text{if } -1 \leq x < 2, \\ 8 - 4x & \text{if } x \geq 2. \end{cases}$$

   (b) Yes. A quick sketch of the graph of this function and a mention of the horizontal line test (or equivalent statements) would suffice as an explanation.

Version B: In problem 1, Paolo runs at 4 meters per second.

1. 55.7333 m

2. 12.5676 feet

3. (a) 28.92919 cm (b) 6.506137, 11.49386, 20.506137

4. (a)
$$h(x) = \begin{cases} 3x - 4 & \text{if } x \leq -2, \\ x - 8 & \text{if } -2 \leq x \leq -1, \\ 3x + 8 & \text{if } x > -1. \end{cases}$$

   (b) Yes. A quick sketch of the graph of this function and a mention of the horizontal line test (or equivalent statements) would suffice as an explanation.