Math 120 A, B - Winter 2009
Mid-Term Exam Number One
January 29, 2009
Answers

There were two versions of the exam.

Version A - The left edge of the figure in problem 1 has length 5.

1.

$$\text{area} = \begin{cases} -\frac{3}{10}x^2 + 5x & \text{if } 0 \le x \le 5, \\ 2x + \frac{15}{2} & \text{if } 5 \le x \le 9. \end{cases}$$

2. (a) \$11.465 (b) \$7816.447.

3. 5.5163 hrs.

4. The minimum distance to the bear is 41.57597 feet.

Version B - The left edge of the figure in problem 1 has length 10.

1.

$$\text{area} = \begin{cases} -\frac{3}{10}x^2 + 10x & \text{if } 0 \le x \le 10, \\ 4x + 30 & \text{if } 10 \le x \le 18. \end{cases}$$

2. (a) \$17.3841 (b) \$10914.09918.

3. 0.52249 hrs.

4. The minimum distance to the bear is 18.569533 feet.