

# Math 120: Final Examination

Spring 2013

Total= 70 points. Time= 2 hours.

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## Instructions:

1. Cell phones and any other electronic devices **must be put on** and **silenced** for the duration of the exam.

Students are expected to respect the Academic Code of Honor.

All work must be shown. Answers without justification are not acceptable.

You must clearly show the question number and section number for each answer.

For every answer sheet that is

Calculator not allowed

Students will be allowed to enter the first 15 minutes of the exam or 15 minutes of the

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1. Find the  $x$  and  $y$  intercepts and sketch the following graph using transformations. Show clearly all the intercepts and asymptotes. (6)

$$y = \log(x + 1) + 2$$

2. Let  $f(x) = \frac{1}{x}$ ; exam. 2

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9. Write the equation of the circle given below in standard form and then find its center and radius. (4)

$$x^2 + y^2 + 6x + 2y + 6 = 0$$

10. Sketch the solution of the following system of inequalities. (4)

$$x^2 + y^2 \leq 16$$

$$x + y > 2$$

11. With 10 euros you can buy one chocolate bar and 2 orange bars. With 8 euros you can buy 2 chocolate bars and one orange bar. How much does a chocolate bar cost? (4)