MATH 115: EXAM 03

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Answer the questions in the spaces provided on the question sheets and turn them in at the end of the class period. Unless otherwise stated, all supporting work is required. You may **not** use any calculators.

Name: _____

Problem	Points Earned	Points Possible
1		20
2		20
3		20
4		20
5		20
Total		100

Date: November 5, 2014.

1. Problems

1. *What are the possible zeroes of the polynomial function*

$$f(x) = x^3 - 8x^2 + 5x + 14?$$

2. *Decide whether the binomial* $x+1$ *is a factor of the polynomial* $x^6 - x^5 + 3x^3 - 2x^2 + 3$. *Carefully* **justify** *your answer.*

3. *Solve the inequality*

$$x^2 + 3x - 10 > 0$$

and give your answer in interval notation.

4. *Solve the equation*

$$\log_2(x+3) + \log_2(x-3) = 4$$

for x.

5. *Solve the equation*

$$\ln(x) + \ln(x-2) = \ln(3)$$

for x.