

**Division of Arts and Sciences**

**College Math**

**Final Exam**

Student Name:

Date:

Instructor:

Lucie Mingla

College Math – MAT 105

Summer Semester 2015

**This exam is required by ASA Administration. Answer all questions and show accompanying detailed solutions ONLY on these pages to receive full credit.**

* *No Cell phones or any electronic devices are allowed during the exam.*
* *Once the final exam begins, students cannot leave the room until the exam is finished.*
* *No scrap paper is allowed during the exam.*

**Multiply polynomials.**



**Simplify.**



**Simplify.**



**Add or subtract rational expressions, reduce if possible.**



**Solve the rational equation.**



**Solve this equation using Quadratic Formula**



**Simplify the radical expression.**



**Give domain and range, and indicate whether the relation is a function or not.**



1. **Find Domain of the functions below.**

1. **Let**

Find 

1. **Let**  ,

Find

1. **Let, find the composition of the two functions at the given value of.**

Find

1. **M is the midpoint of AB. Find.**

A

M

B

A

D

B

C

*Angle Bisector*

1. **BD bisects angle ABC. Solve for.**
2. **Use properties of complimentary angles to solve for and find measure of angle ABD.**

D

A

B

C

1. **Find.**

1. **Use the properties of parallel lines to solve for *x*.**

1. **Use the properties of isosceles triangles to find *x*.**

1. **Solve for *x* and find measure of angle A.**

A

B

C

D

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1. **For the pair of triangles, give the reasons for congruence and find *x*.**

A

B

C

D

E

F

C[Type a quote from the document or the summary of an interesting point. You can position the text box anywhere in the document. Use the Drawing Tools tab to change the formatting of the pull quote text box.]

1. **Triangle ABC is similar to triangle DEF. Solve for *x.***

2x+3

D

E

F

A

B

C

1. **In the right triangle below find x, and the value of the following trigonometric functions:**

A

B

C

**sinB =**

**cos B =**

**tan C =**

1. **Use the properties of special right triangles to find *x* and *y*. Write the answer in radical form.**
2. **Use trigonometric functions to solve for *x*. Round the result to two decimal places.**

A

C

B

**Bonus:**