**Name: Section:**

**Instructor:**

**Points: 60 VERSION A TIME: 20 minutes**

**DIRECTIONS**

**DO NOT OPEN THIS BOOKLET UNTIL INSTRUCTED TO DO SO.**

* **Authorized Resources**: Only the TI-30XIIS or TI-30XIIB calculator and CalcTool version 2.7.0a are authorized. You may not share authorized resources during the exam.
* You have 30 minutes to complete this exam. Start / stop times will be written on the board.
* Your work will be assessed based on *communicated proficiency* with the subject matter. In particular, your work should be well-executed, well-communicated, and essentially correct.

**COURSE POINTS:**

ACADEMIC SECURITY: This examination is not to be released from academic security until 1600, 30 April 2015. Until that time, you may not discuss the examination contents or the course material with anyone other than your instructor. \_\_\_\_

INTEGRITY: Your honor is extremely important. This academic security policy is designed to help you succeed in meeting academic requirements while practicing the honorable behavior our country rightfully demands of its military. Do not compromise your integrity by violating academic security or by taking unfair advantage of your classmates.  Cadets wanting to help each other study for the examination can only do so as long as none of the cadets studying together have taken the examination.\_\_\_\_\_

1. (15 points) Find the length of a curve defined by the parametric equations
2. (15 points) Sketch the path and direction of a particle traveling along

1. (15 points) Find a Cartesian equation relating and corresponding to the parametric equations
2. (15 points) Select the graph and note the direction of travel for and .

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**Name: Section:**

**Instructor:**

**Points: 60 VERSION B TIME: 20 minutes**

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1. (15 points) Find the length of a curve defined by the parametric equations



1. (15 points) Sketch the path and direction of a particle traveling along
2. (15 points) Find a Cartesian equation relating x and y corresponding to the parametric equations

4. (15 points) Select the correct graph and note the direction of travel for and  **.**

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