

NORTHWEST FLORIDA STATE COLLEGE  
Department of Mathematics

Calculus I  
Test 1

Name: \_\_\_\_\_

SID: \_\_\_\_\_

D. P. Story, Spring 2011

**Exam Record**

Part I. \_\_\_\_\_ / 100 pts

Part II. \_\_\_\_\_ / 50 pts

Total: \_\_\_\_\_ / 150 pts

Grade: \_\_\_\_\_

**Part I.** (100 points) Solve each of the problems without error. If you make an error, points will be subtracted from your total score.

(5<sup>pts</sup>) 1. This is an example of a objective question, the student fills in his/her response in the space below.

5 pts

(5<sup>pts</sup>) 2. An example of a fill-in question: It is well known that \_\_\_\_\_ and \_\_\_\_\_ are jointly credited as the founders of modern calculus.

5 pts

(3<sup>pts</sup><sub>ea.</sub>) 3. *True or False.* No justification needed.

(a) \_\_\_\_\_ If triangles have 4 sides, then all monkeys are green. Now is the time for all good men to come to the aid of their country.

12 pts

(b) \_\_\_\_\_  $1 + 1 = 3$  iff  $\sqrt{2}$  is a rational number. Now is the time for all good men to come to the aid of their country.

(c) \_\_\_\_\_  $(\forall x)(\exists y)(xy > 1)$  ( $x, y$  real numbers). Now is the time for all good men to come to the aid of their country.

(d) \_\_\_\_\_  $(\forall x)(\exists y)(\forall z)(z(x + y) > 0)$ , ( $x, y,$  and  $z$  real numbers).

(15<sup>pts</sup>) 4. Here is an example of an auto calculate problem. It takes the optional argument '[\auto]'. You specify the points associated with each part using the \PTs command.

15 pts

(a) (10 pts) This a hard one!

(b) (5 pts) This one is "half" as hard.

(11<sup>pts</sup>) 5. Select the correct answer for each of the following multiple choice. There is only one correct answer.

(a) (5 pts) In what year did Columbus sail the ocean blue?

- 1490       1491       1492       1493

11 pts

42 pts

**Problem 5 (cont.)**

(b) (6 pts) In what year did Columbus sail the ocean blue?

 1490 1491 1492 1493(5<sup>pts</sup>) **6.** Which of the following best describes Augustin Cauchy? He developed the Calculus while his University was closed for the plague. Given credit for first using the functional notation  $f(x)$ . He created the "bell-shaped curve" and first used the method of least squares. He first formulated a precise definition of the limit and continuity of a function. Gave a rigorous definition of the definite integral—an integral that now bears his name. His notation for the derivative and the integral is used even to this day.

5 pts

(3<sup>pts</sup>) **7.** This is a question. Work on the back of page 1 (the cover page), and be quick about it!

3 pts

(7<sup>pts</sup>) **8.** This is a question. Now is the time for all good men to come to the aid of their country. Peter Piper picked a peck of pickled peppers.

7 pts

(5<sup>pts</sup>) **9.** This is a question worth 5 points.

5 pts

(10<sup>pts</sup><sub>ea.</sub>) **10.** Answer each of the following questions.

(a) This is a question.

20 pts

36 pts

**Problem 10 (cont.)**

(b) This is a question.

(12<sup>pts</sup>) **11.** Solve each of the following. Work on the back of page 2

(a) This is a question. Be sure you don't make any error, I'm watching.

(c) This is a question.

12 pts

(b) This is a question.

(d) This is a question.

22 pts

**Part II.** (50 points) The following is a short review of previously mastered material.

(5<sup>pts</sup>) **1.** This is a question.

5 pts

(7<sup>pts</sup>) **2.** This is a question.

7 pts

(8<sup>pts</sup>) **3.** This is a question.

8 pts

20 pts

(5<sup>pts</sup>) 4. This is a question.

5 pts

(10<sup>pts</sup>) 5. This is a question.

10 pts

(5<sup>pts</sup>) 6. This is a question.

5 pts

(10<sup>pts</sup>) 7. This is a question.

10 pts

30 pts