

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

8 pts
- (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.
- (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 a 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.
- (10<sup>pts</sup>) **5.** Select the correct answer for each of the following multiple choice. There is only one correct answer. 

10 pts
- (a) (6 pts) In what year did Columbus sail the ocean blue?  
(a) 1490      (b) 1491      (c) 1492      (d) 1493
- (b) (4 pts) In what year did Columbus sail the ocean blue?  
(a) 1490  
(b) 1491  
(c) 1492  
(d) 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

(5<sup>pts</sup>) 7. Which of the following are primary colors?

Blue                      Green                      Yellow                      Orange                      Red

5 pts

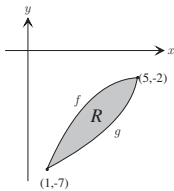
(3<sup>pts</sup>) 8. This is a question. Work on the back of page 1, and be quick about it!

Peter piper picked a peck of pickled peppers, how many pecks of pickled peppers did Peter Piper pick?

3 pts

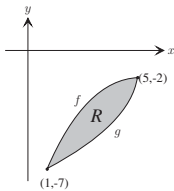
Answer:
---------

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



5 pts

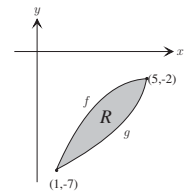
(7<sup>pts</sup>) 10. This is a question worth 7 points.



7 pts

(10<sup>pts</sup><sub>ea.</sub>) 11. Answer each of the following questions.

(a) This is a question.



20 pts

(b) This is a question.

45 pts

(12<sup>pts</sup>) **12.** 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.

(b) This is a question.

(d) This is a question.

12 pts

12 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

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

5 pts

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

10 pts

35 pts

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

5 pts

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

10 pts

15 pts