Answer key

Math 132: Discussion Session: Week 1

Directions: In groups of 3-4 students, work the problems on the following page. Below, list the members of your group and your answers to the specified questions. Turn **this paper** in at the end of class. You do not need to turn in the question page or your work.

Additional Instructions: It is okay if you do not completely finish all of the problems (especially the challenge problem), but you should solve most of the problems. Also, each group member should work through each problem, as similar problems may appear on the exam.

Group Members

Group Answers

Derivative Practice

1. a. $f'(x) = \dfrac{2x(x^3+4)-3x^2(x^2+2)}{(x^3+4)^2}$

   b. $g'(x) = 0$

   c. $h'(x) = -\tan(1+x) + \dfrac{\sin x}{1+\cos x}$

   d. $i'(x) = x^{e^x}\left[e^x \ln x + e^x/x\right]$

4.9 : Practice Problem Answers

1. a. $f(x) = \tan x + \sec x - 2 - \sqrt{2}$

   b. $f(x) = t^4/12 - \ln t + (2+t^2/3)t - 11/3 + \ln 2$

   c. $f(x) = -\sin x + 3/2\,t^2 + 3t + 1$

2. The car was traveling at a speed of 80 ft/s

5.1: Introduction Problem Answer

1. d. The approximation to the area is 2.75

Challenge Problem Answer

1. a. The maximum distance is: 22.91 mi

   b. The maximum distance is: 21.68 mi

   c. The minimum time is: 30 min, 33s

   d. The distance between the stations is: 55.43 mi