

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

1. Class notes for this week: This week we have covered Sections 2.9 and part of Section 3.1. Next week we will talk more about Section 3.1 and cover Sections 3.2 and 3.3.
2. (a) (1 point) Let  $f(x)$  be a differentiable function. Suppose you know that  $f(1) = 4$  and  $f'(1) = 7$ . Approximately what is  $f(1.02)$ ?  
(b) (1 point) Find an approximate value for  $\tan(46^\circ)$ .

3. Let  $f(t) = t\sqrt{4 - t^2}$ .

- (a) (1 point) Find all the critical numbers of  $f$ .
- (b) (2 points) What are the absolute maximum and minimum of  $f$  on  $[-1, 2]$ ?