AP Calculus AB Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Appox. and Definite Integrals Quiz Review 3

**Non-Calculator:**

Evaluate the following definite integrals:

1.  2. 

3.  4. 

5. Given  and , find .

6. Given:  and  and that the function is continuous,

differentiable and greater than zero on , find the following values:

a)  b) 

 c)  d) 

7. A particle is moving along a horizontal path such that its velocity is given by the function

. Set up an integral expression and use a graphing calculator to evaluate the

integral that will give you the following:

a) The total distance traveled in the first 12 seconds.

 b) The displacement in the first 12 seconds.

8. Given , approximate the area bound by , the lines , and

the *x*-axis if *n* = 5

 a) Right endpoints b) Left endpoints c) Midpoints d) Trapezoids

9. The rate at which factory B produces jellybeans is modeled by the function 

where *t* is time in hours since the factory opens and *r(t)* is measured in pounds of jellybeans. The

factory has to fill 31 pound bags for shipping to regional distributors. On Tuesday, April 5th, the

factory closes at 5:00 pm and has 27 pounds of jellybeans left unpacked in a shipping bag. The

next day, they open at 9:00 am and close at 5:00 pm. How many total bags (31 pounds each)

were they able to ship out on Wednesday, April 6th?