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

Lesson 7-1 Learning Check Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

***All problems*** ***are CALCULATOR ACTIVE!!***

**Multiple Choice.**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | 0 | 3 | 6 | 9 | 12 | 15 |
|  | 4 | 8 | 6 | 9 | 10 | 10 |

1. The data for the acceleration *a*(*t*) of a car from 0 to 15 seconds are given in the table below. If the

 velocity at is 5 ft/sec, which of the following give the approximate velocity at using

 trapezoidal approximation.

 (A) 47 ft/sec (B) 52 ft/sec (C) 120 ft/sec (D) 125 ft/sec (E) 141 ft/sec

2. The rate at which customers arrive at a counter to be served is modeled by the function *F* defined by

 for , where is measured in customers per minute and *t* is measured

 in minutes. To the nearest whole number, how many customers arrive at the counter in during the 60

 minute period?

 (A) 720 (B) 725 (C) 732 (D) 744 (E) 756



3.

OVER 🡪

****4.

**Free Response.**

5. Given , do the following:

 (a) Determine when the particle is moving to the right, left, and stopped

 (b) Find the particle’s displacement for the given time interval. If , what is

the particle’s final position?

 (c) Find the toal distance traveled by the particle.