

## Calculus

### Warm-Up Rates of Change

The position of a particle over the interval  $[3.7, 6.1]$  is given in the table below. Use the table to answer each of the following questions.

|               |     |     |     |     |     |
|---------------|-----|-----|-----|-----|-----|
| $t$ (sec)     | 3.7 | 4.3 | 4.9 | 5.5 | 6.1 |
| $s(t)$ (feet) | 1.8 | 3.4 | 4.6 | 6.4 | 5.7 |

- 1) How far did the particle travel over the interval  $[3.7, 5.5]$ ?
- 2) What is the average velocity of the particle over the interval  $[4.3, 5.5]$ ? What does this tell you about the motion of the particle.
- 3) What is the average velocity of the particle over the interval  $[5.5, 6.1]$ ?
- 4) Estimate the instantaneous velocity at  $t = 4.9$ .