Position, Velocity, and Acceleration: Guided Notes

 

  

  

| Velocity |
| --- |
| Table  Description automatically generated  |
| Speed = |Velocity| |
|   |

Speed, on its own, measures how fast an object is traveling. Velocity represents both the speed and direction traveled.

# Example Problems

The function  on the closed interval  models a particle’s vertical motion along a line.

**1)** At what value(s) of  is ? Describe the particle’s motion.

**2)** At what value(s) of  is ?

**3)** On what interval(s) is ? ?

**4)** On what interval(s) is ? ?

**5)** Based on these results, when is the particle speeding up on the time interval? When is the particle slowing down? Justify your answers.