

The motion of a particle along a line is described by the velocity function

$$v(t) = t^2 - 5t + 6 \quad s(0) = 4$$

- a) Find its position at time  $t = 2$
- b) Find its acceleration at time  $t$ .
- c) For which times  $t$  is the particle at rest?
- d) For which times  $t$  is the particle moving to the right?
- e) For which times  $t$  is the particle moving to the left?
- f) Find the distance traveled by the particle from  $t = 0$  to  $t = 3$ .
- g) Find the displacement of the particle between time  $t = 0$  and  $t = 3$ .