9. The motion of a particle along a line is described by the velocity function $v(t) = -t^2 + 5t - 6$. $s(0) = 4$

a) Find its position at time t.
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 $t = 3$.