**Calculus BC – Vectors**

Given a particle’s position vector **c**(t) = <e2t, ln(t + 1)>, find:

a) **c**(0)

b) **c**(1)

c) its velocity vector **v**(t)

d) **v**(1)

e) the particle’s speed when t = 1

f) the particle’s displacement over the interval [0, 1]

g) its acceleration vector **a**(t)

h) **a**(1)

1. the magnitude of **a**(1)

j) the distance the particle travels on (0, 1)