NAME: (print!) _____   **Section:** _____

E-MAIL ADDRESS: (print!) _____

1. Differentiate
$$y = \frac{s+2}{s^2 - 1} \quad .$$

2. A particle moves according to a law of motion $s = t^2 - 4t + 8$, $t > 0$, where t is measured in seconds and s is measured in feet.

(a) Find the velocity at any given time t.

(b) What is the velocity after 1 second?

(c) When is the particle at rest?

(d) When is the particle moving in the positive direction?

(e) Find the total distance travelled during the first 3 seconds.