

MINI-QUIZ B1

STANDARDS GRADE

Parametric Unit - Learning Target B

NAME: _____

PERIOD: ___ DATE: _____

1. A hot air balloon moves according to the equations below, where t is in minutes, $x(t)$ describes the balloon's horizontal distance from its targeted landing site (in hundreds of feet), and $y(t)$ describes its height from the ground (in hundreds of feet)

$$x(t) = -\frac{2}{3}t + 5$$

$$y(t) = -\frac{3}{4}t + 6$$

- a. Will the balloon land on its targeted landing site? If so, explain how you know. If not, will it land before or after its landing site?
- b. What is $\frac{\Delta x}{\Delta t}$ and what does it mean in this situation? What are its units?
- c. What is $\frac{\Delta y}{\Delta t}$ and what does it mean in this situation? What are its units?
- d. What is $\frac{\Delta y}{\Delta x}$ and what does it mean in this situation? What are its units?