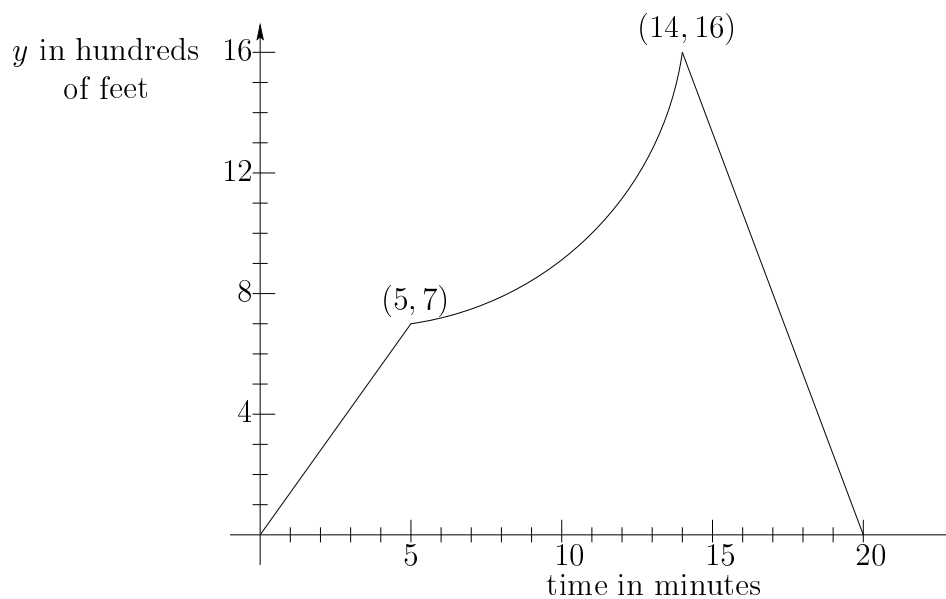


Math 120  
Autumn 1999

**Worksheet 3:** Setting up and interpreting a multipart function.

A kite is released from ground level and the graph of its height above ground as a function of time is shown below. the portion of the graph between  $t = 5$  and  $t = 14$  is a quarter circle.



- (a) Find formulas for the height  $h(t)$  of the kite during the first 5 minutes, the time between 5 and 14 minutes, and during the last 6 minutes.
- (b) Write down a multipart function which gives the height as a function of time.
- (c) How long did the kite spend above 1000 feet?
- (d) What is the average rate of change of the kite between 5 minutes and 10 minutes?  
Between 12 minutes and 18 minutes?