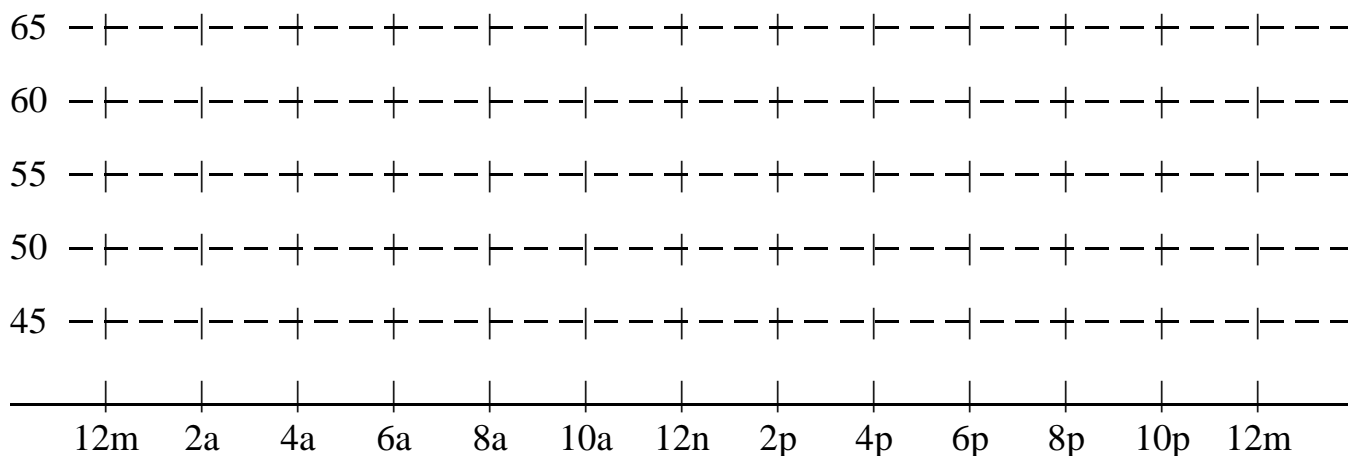


1. The following data represents a random sample of time and temperatures (in degrees Fahrenheit) in Clinton, IL, on November 8, 2010.

47.1°	2:38 am	47.3°	4:59 am	56.1°	9:53 pm
61.3°	6:36 pm	54.5°	11:10 pm	47.5°	4:38 pm
56.5°	9:27 pm	65.1°	11:33 am	55.0°	10:20 pm
47.3°	2:27 am	55.6°	9:02 am	57.0°	8:32 pm
				48.9°	8:01 am

a. Plot the temperature (vertical axis) against the time (horizontal axis) and then connect the points to make a temperature curve.



b. How many minutes separate the two extreme times?

c. Estimate the average temperature for the day using left hand endpoints, right hand endpoints, and trapezoids. Give the units for each row. Use an Excel spreadsheet to create a table; provide a printout of the spreadsheet with your answers.

Method	Units	Left hand endpoints	Right hand endpoints	Trapezoids
Area under curve				
Average Temperature				

2. The data below represents the average relative humidity (as a percent) in Clinton, IL, for every third day in August, 2010.

a. In each box, write the weight that would be used for calculating the area using the indicated method.

August	1	4	7	10	13	16	19	22	25	28	31
Humidity	76	75	70	77	74	74	68	74	64	62	72
Left											
Right											
Trapezoid											
Simpson											

b. Complete the following table.

- i. Units: Give the units on the values in each column.
- ii. Weighted sum: The sum of the values using the indicated weights
- iii. Factor: The value you need to multiply by to turn the sum into an area
- iv. Area: The approximate area under the curve
- v. Average: The average humidity for the month

Method	Weighted sum	Factor	Area	Average
Units				
Left				
Right				
Trapezoid				
Simpson				