3. Eugene has gone on an extended bike trip. Using the included graph and the list of data points as you answer each of the following questions. Show all of your work for parts b) and c).

As with Eugene's previous bike trips, t is time in minutes from the beginning of the trip and D is miles from Eugene's house.

a. Use graph paper and re-sketch Eugene's trip. Label clearly, use a ruler.

b. Compute the equation of each of the six line segments in the graph, including the interval (such as $0 \le t \le 15$) for which the equation is valid. Note there is slight bend at $t = 15$.

c. Write a story that describes Eugene's trip, include in the story the time intervals and Eugene's speed (in mph) for the time intervals.
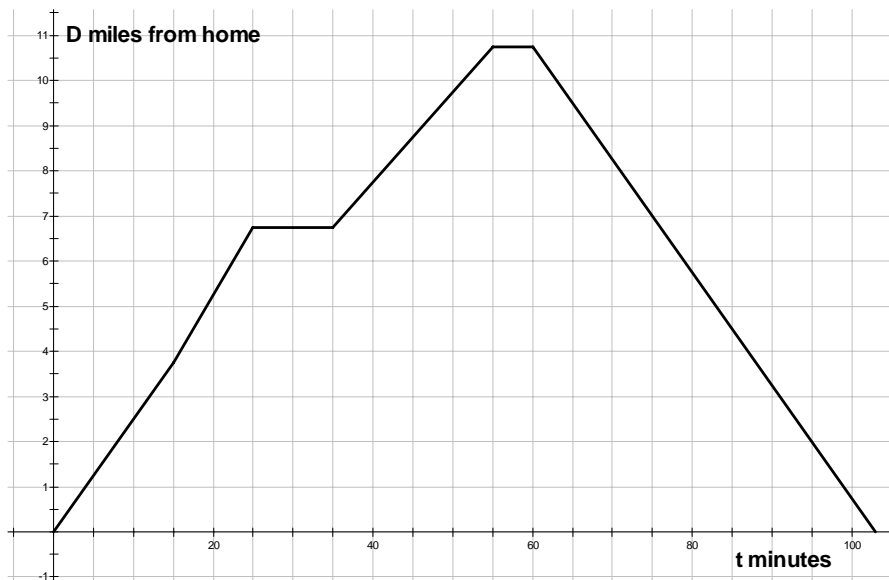
t	D
0	0
15	3.75
25	6.75
35	6.75
55	10.75
60	10.75
103	0

4. Write a story describing your first two hours in the morning out of a tent on a camping trip using time, t, in minutes ($0 \le t \le 120$) as the independent variable and your distance, D, from your tent in either feet or miles as the dependent variable.

Requirements (show your work throughout)
✓ Make sure the story is varied and interesting; i.e., sitting by the campfire for 90 minutes is neither varied nor interesting.
✓ Include times, distances and speeds (of walking, running, biking, etc.) in your story.
✓ Give a data set of points (t, D) corresponding to your story and sketch the graph corresponding to this data set and your story. Label the axes carefully and include appropriate numbers and units. Use graph paper, use a ruler, and be very precise.
✓ Compute your speed in <u>miles per hour</u> for each line segment in your graph. For curved components of your graph, estimate your speed for several places along each curve. Of course, write a story with reasonable speeds.