

Topic 14 Homework (Due Tuesday 5/24)

1. Eugene and Rose have decided to sprint race again, this time for 20 seconds, their speeds at 4 second intervals are recorded below. Both Eugene and Rose are continually increasing their speed during the sprint.

Time (seconds)	0	4	8	12	16	20
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Rose's Speed (feet / second)	15	20	27	35	44	58
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Eugene's Speed (feet / second)	17	21	27	36	42	55
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- a. What is the minimum distance Rose traveled during each of the following times? What is the maximum distance Rose traveled during each of the following times?
- i) The first four seconds
 - ii) The second four seconds
 - iii) The third four seconds
 - iv) The fourth four seconds
 - v) The fifth four seconds
- b. Based on the minimum and maximum distance Rose traveled in the preceding question, what is your best guess for the distance that Rose traveled?
- c. What is the minimum distance Eugene traveled during each of the following times? What is the maximum distance Eugene traveled during each of the following times?
- i) The first four seconds
 - ii) The second four seconds
 - iii) The third four seconds
 - iv) The fourth four seconds
 - v) The fifth four seconds
- d. Based on the minimum and maximum distance Eugene traveled in the preceding question, what is your best guess for the distance that Eugene traveled?
- e. Based on your answers to parts a) – d), who won the sprint? Can you guarantee this answer?