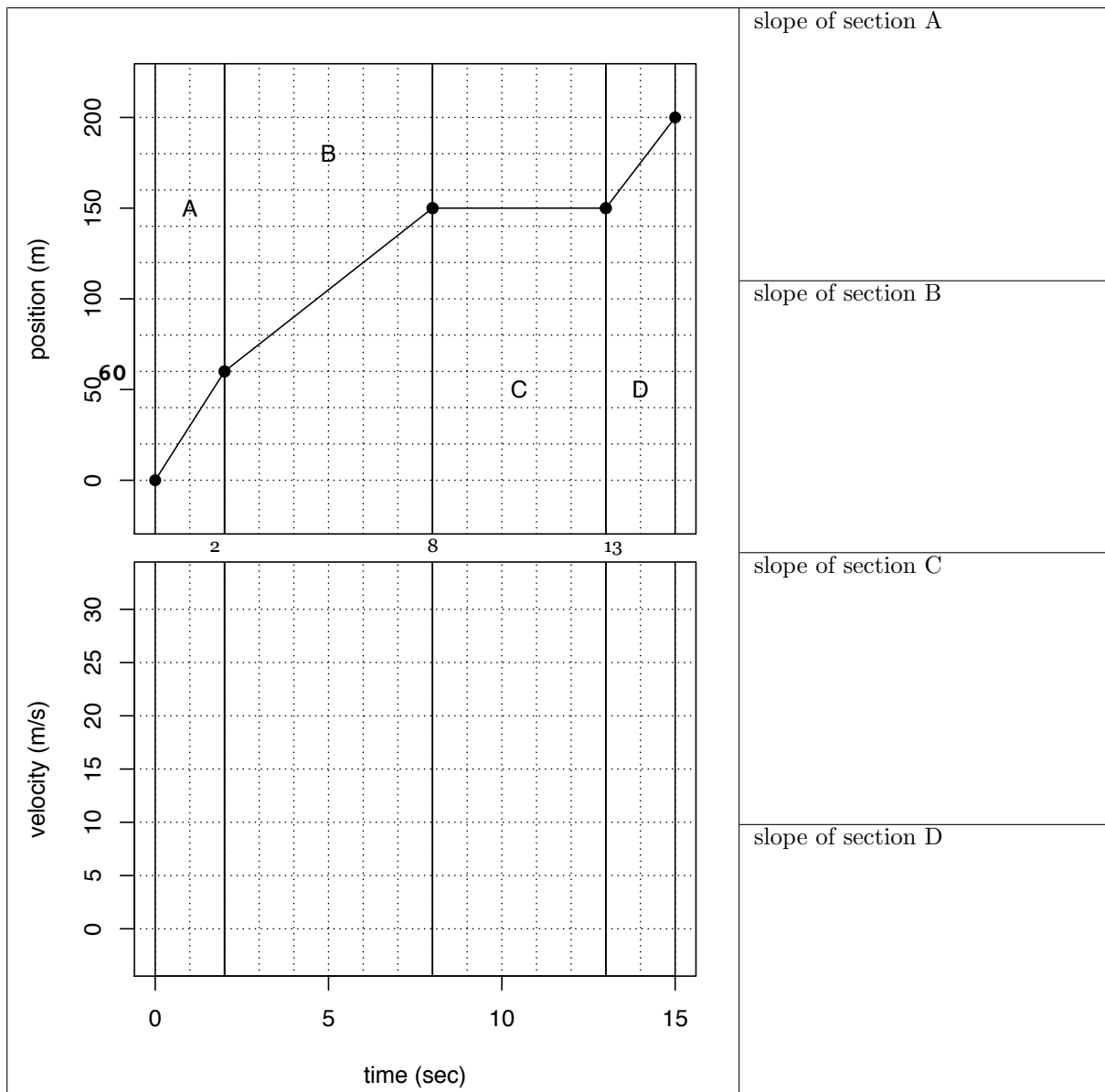


# The SLOPE of a position-time graph is the velocity at that time!

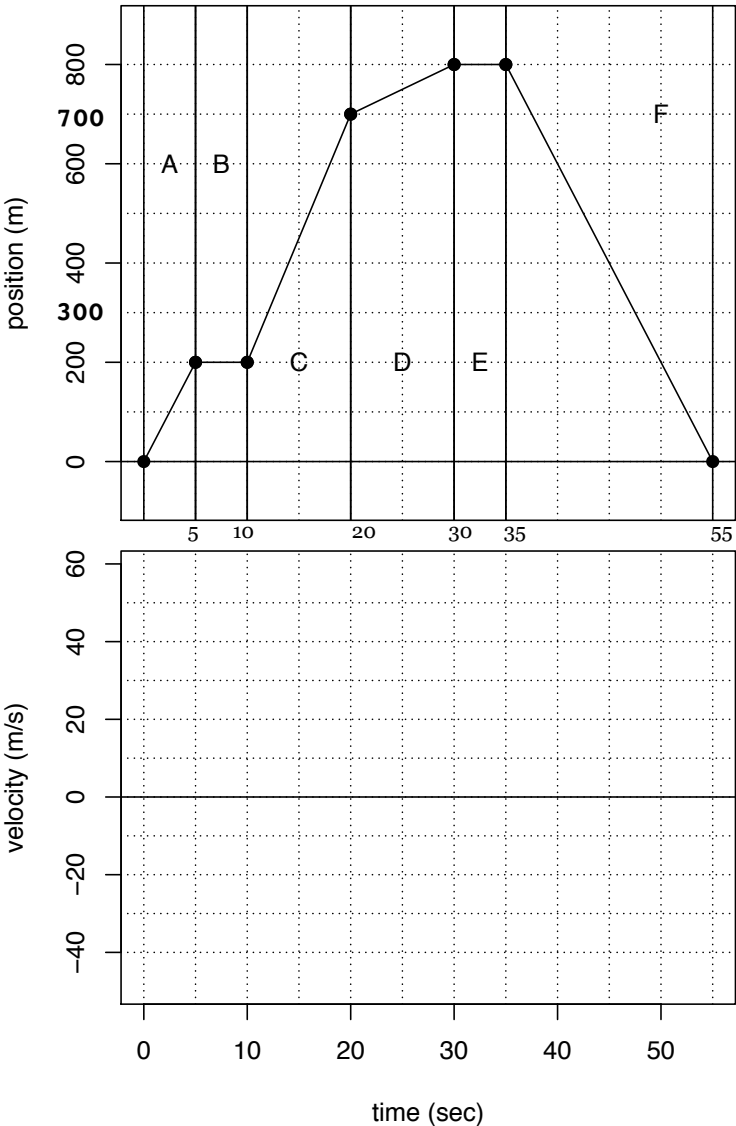
## Question 1

- Find the slope in each section of the position-time graph.
- Draw the corresponding velocity-time graph.



Question 2

- Find the slope in each section of the position-time graph.
- Draw the corresponding velocity-time graph.



slope of section A

slope of section B

slope of section C

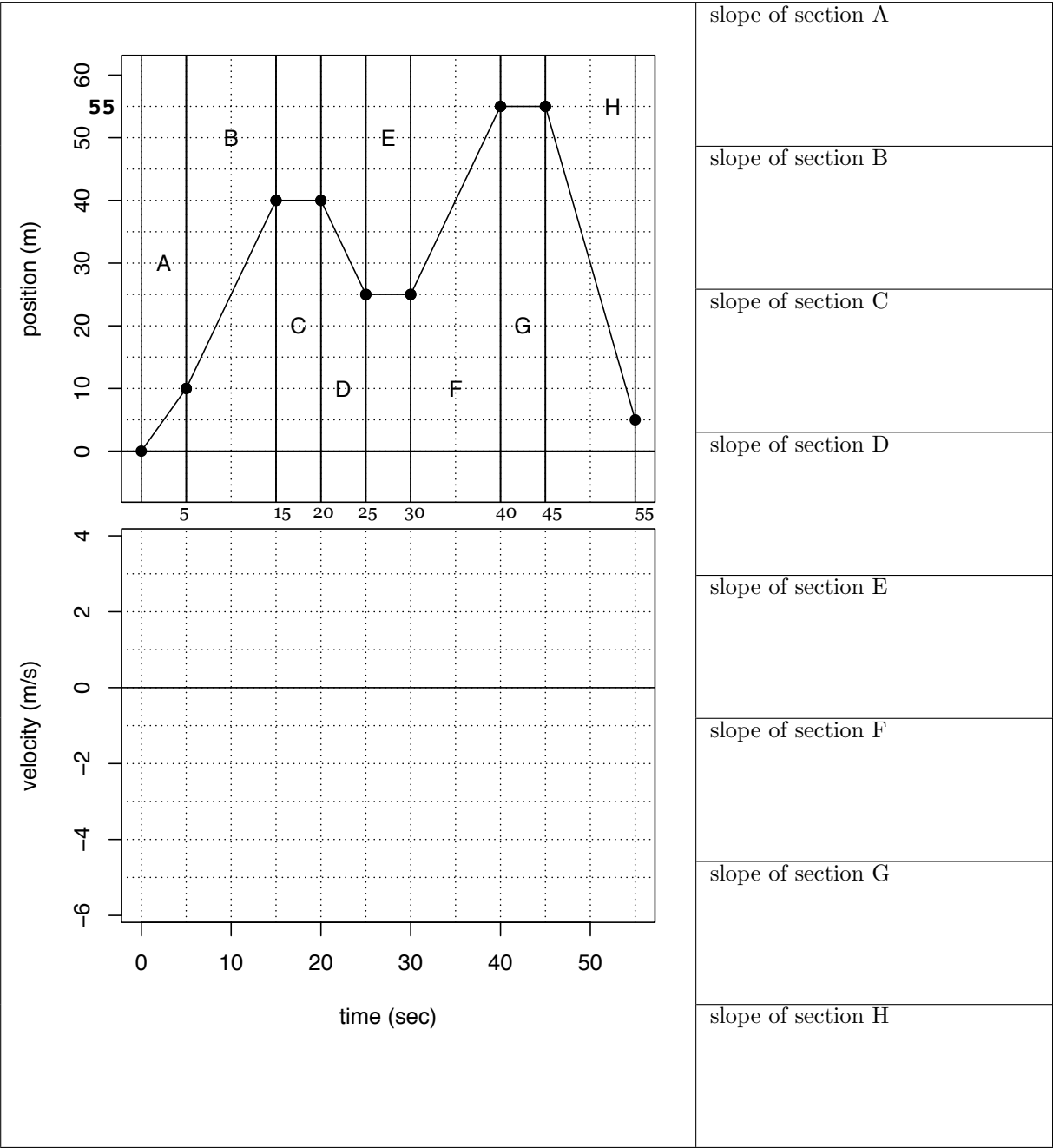
slope of section D

slope of section E

slope of section F

Question 3

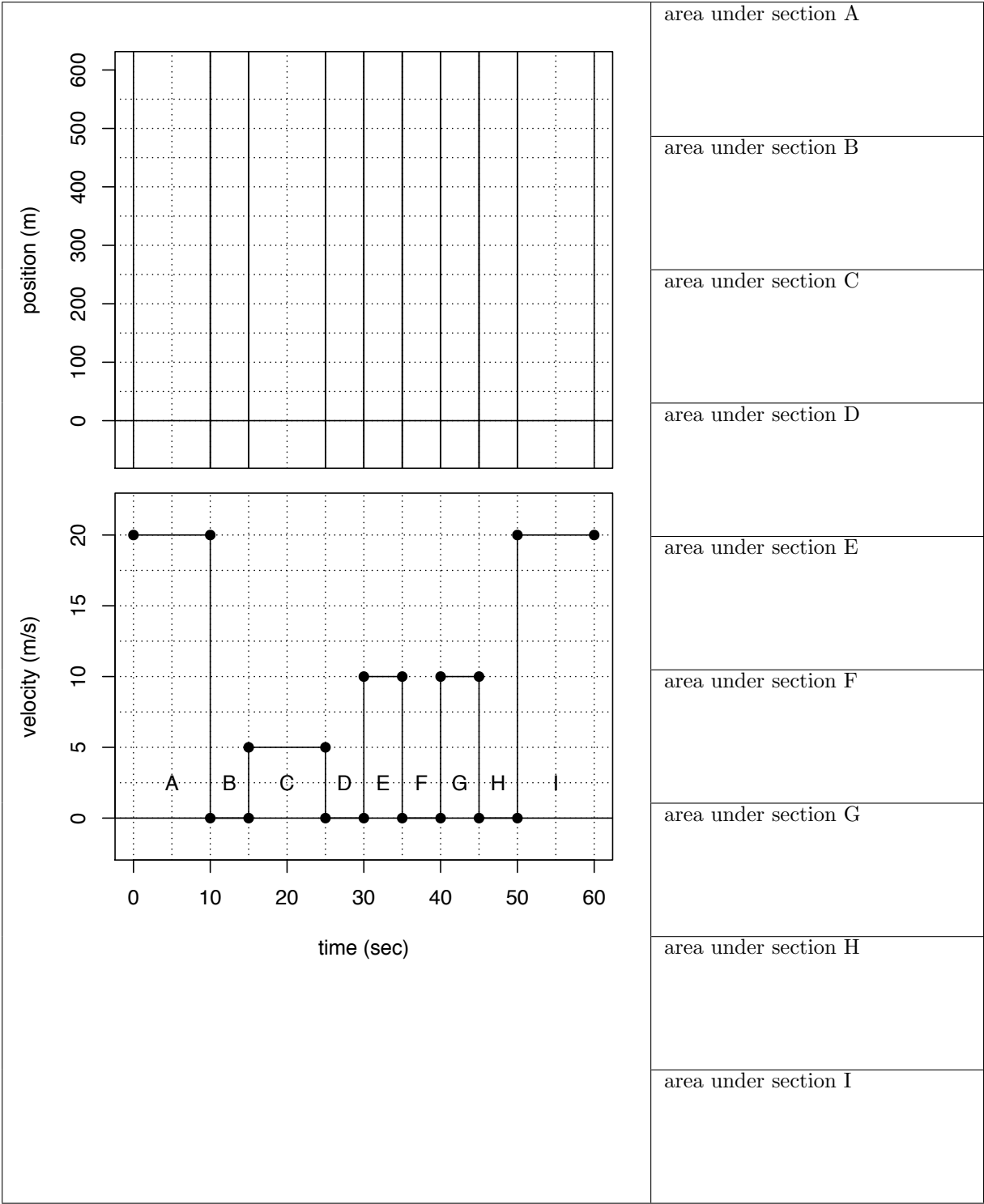
- Find the slope in each section of the position-time graph.
- Draw the corresponding velocity-time graph.



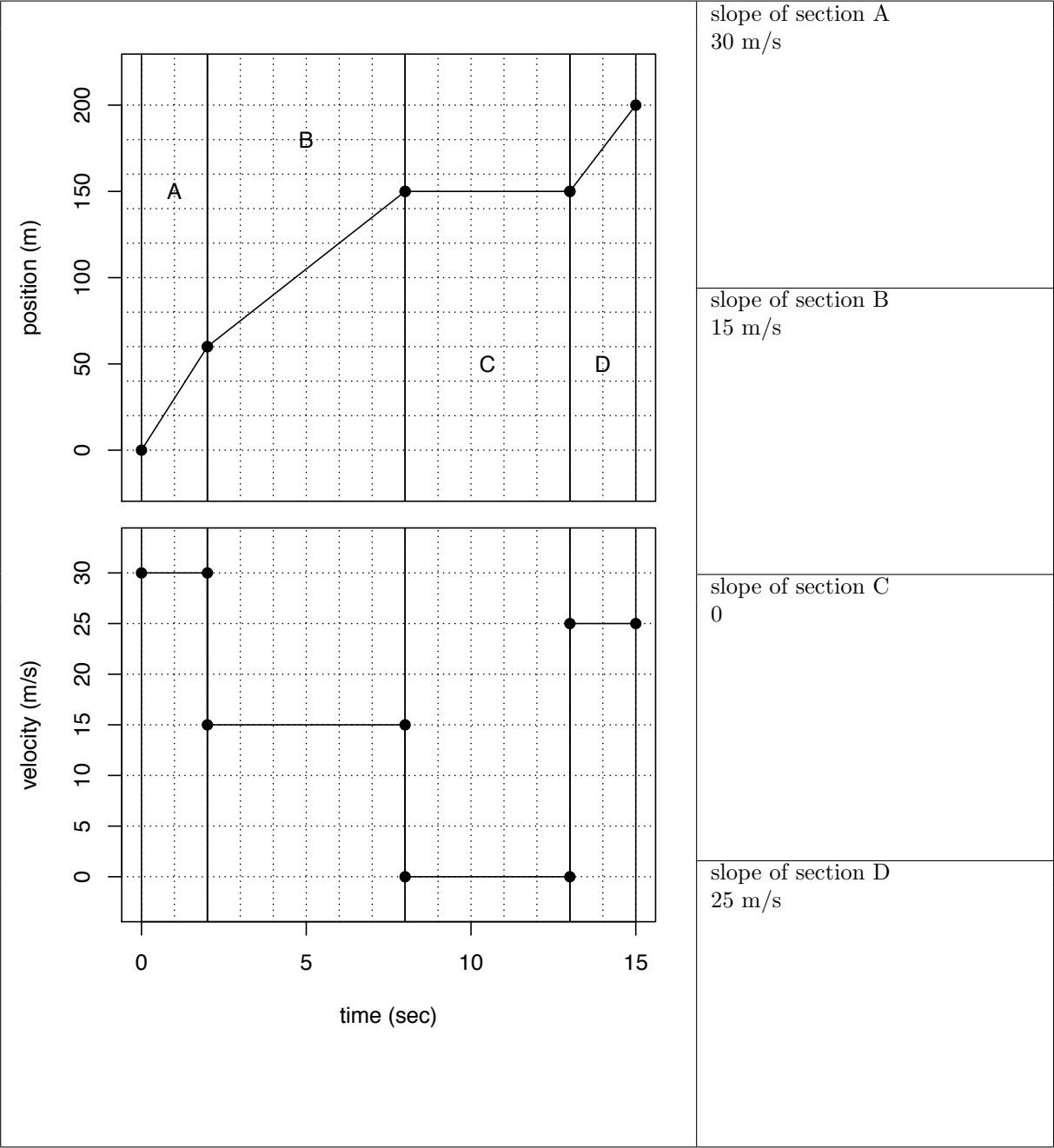
# The AREA under a velocity-time graph is the change in position of that range!

Question 4

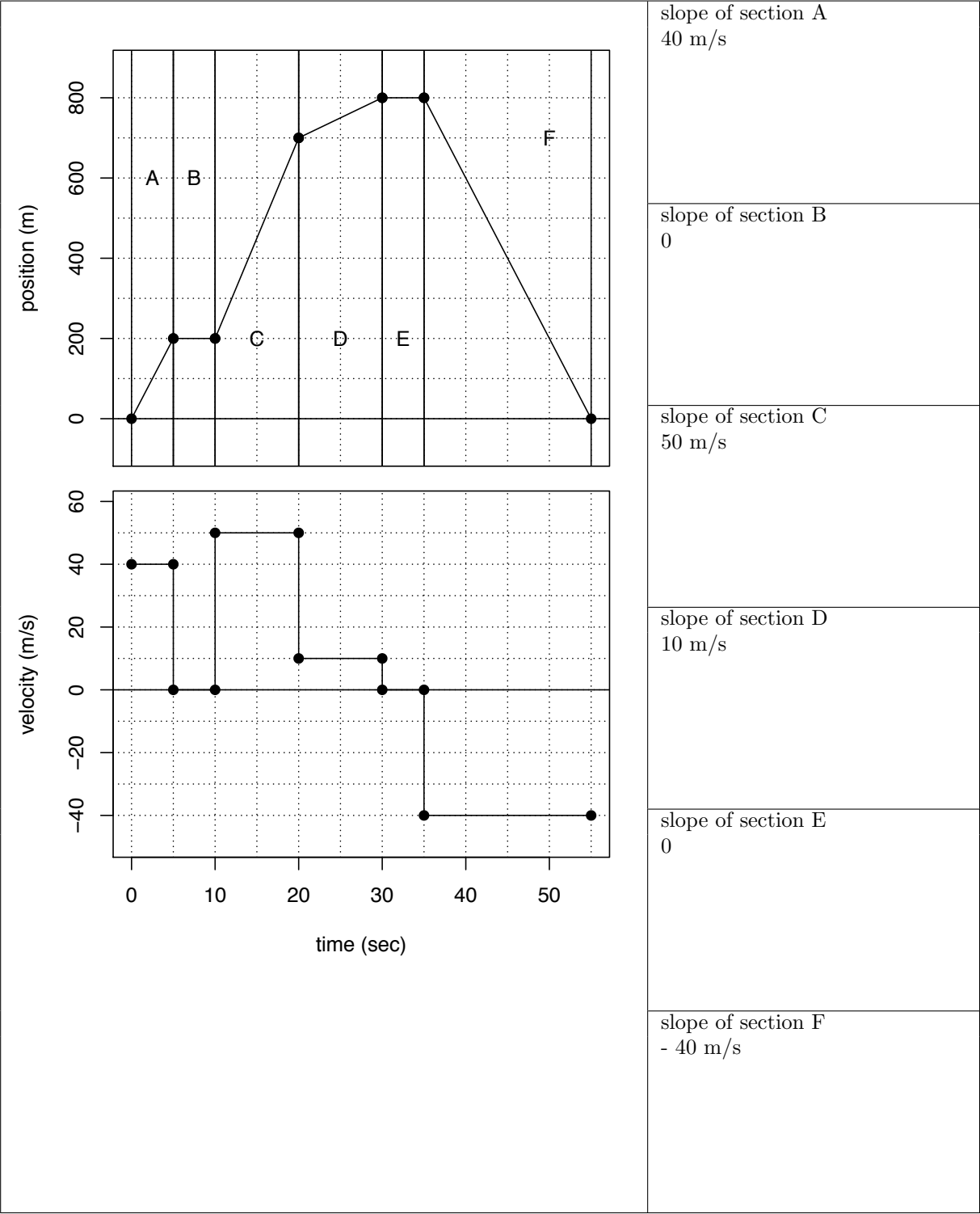
- Find the area under each section of the velocity-time graph.
- Draw the corresponding position-time graph, assuming initial position = 0.



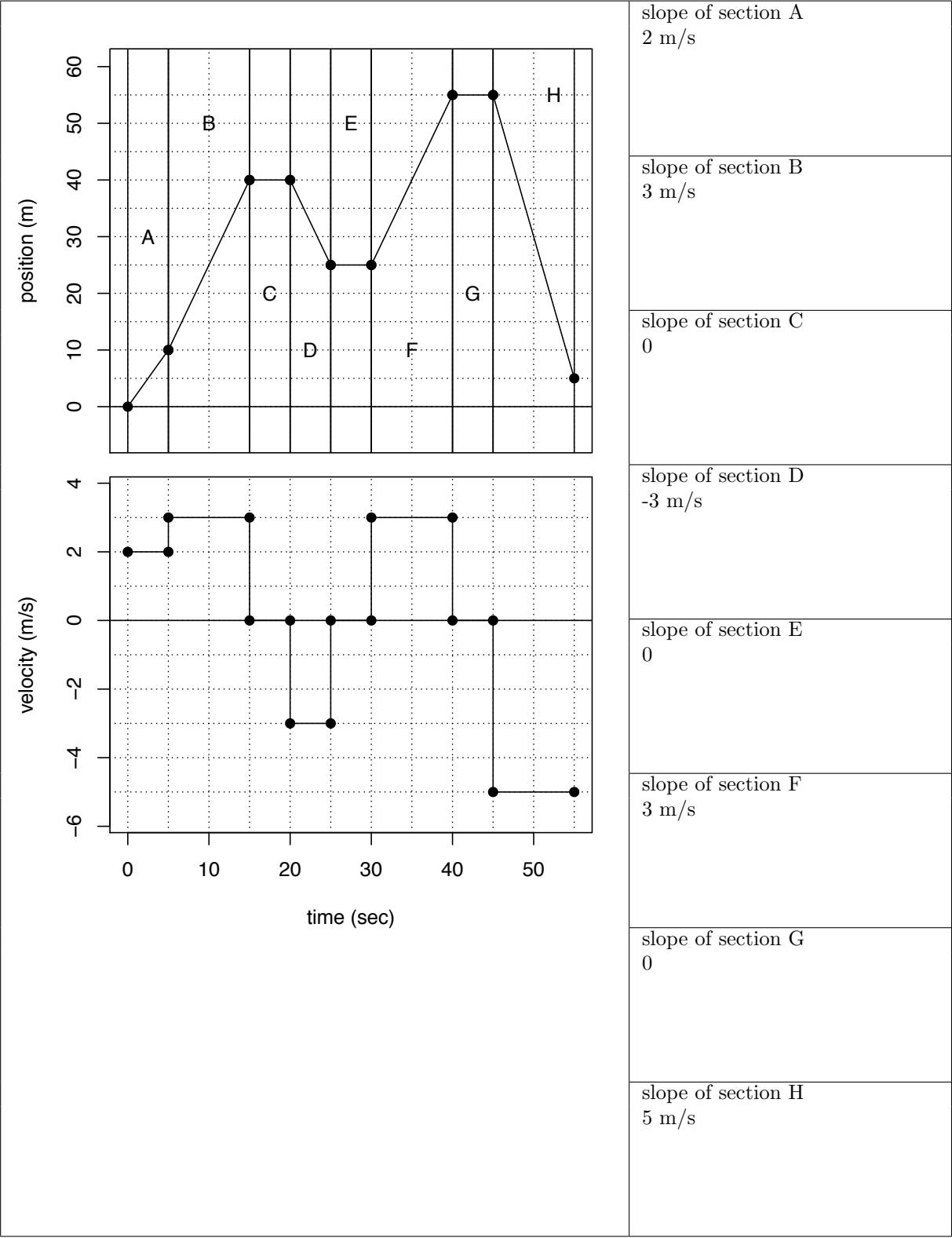
Question 1: Answer



Question 2: Answer



Question 3: Answer



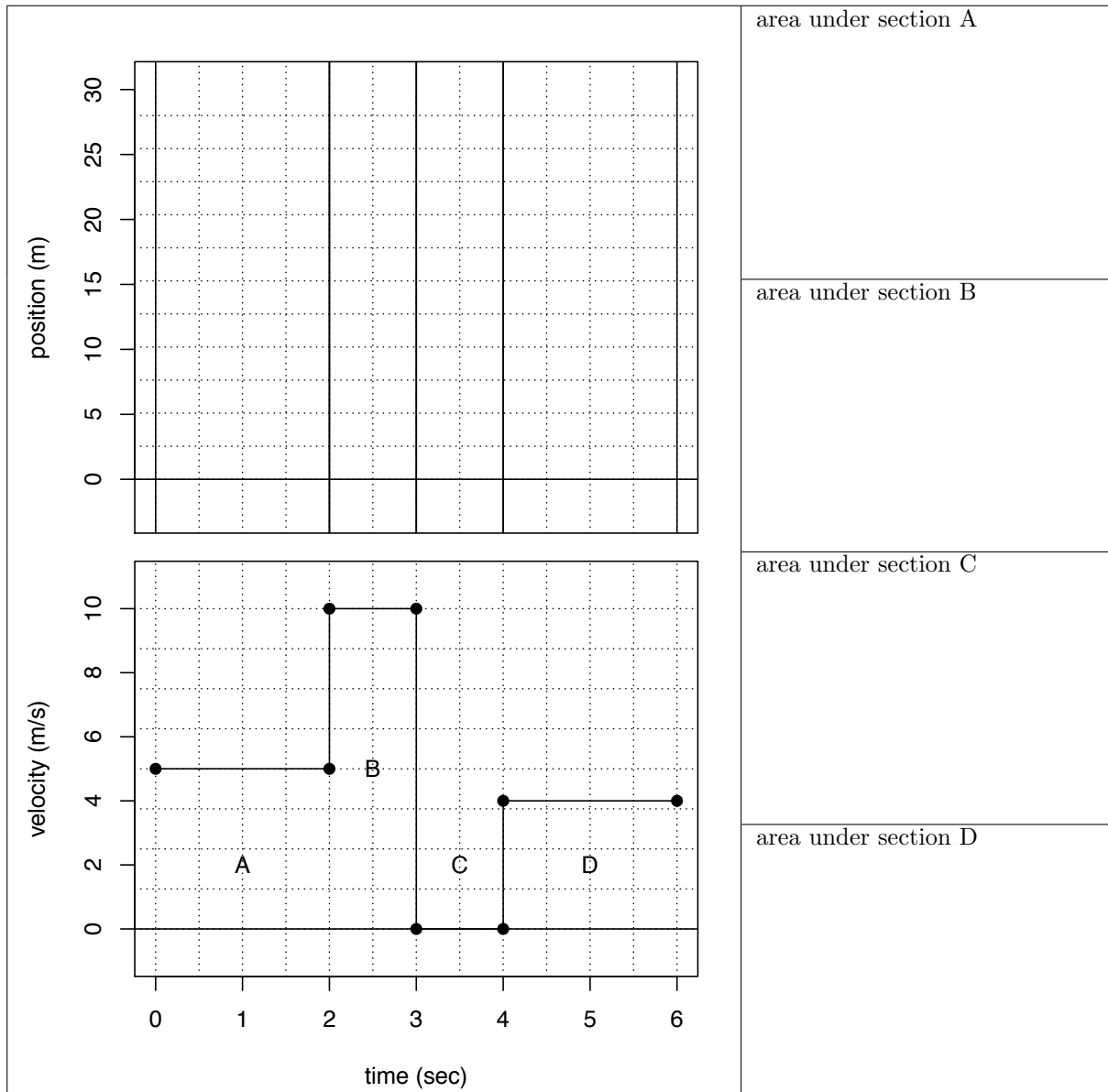
Question 4: Answer

<div><p>position (m)</p><p>time (sec)</p><p>velocity (m/s)</p><p>A B C D E F G H I</p></div>	area under section A 200 m
	area under section B 0 m
	area under section C 50 m
	area under section D 0 m
	area under section E 50 m
	area under section F 0 m
	area under section G 0
	area under section H 50 m
	area under section I 200 m



### Question 5

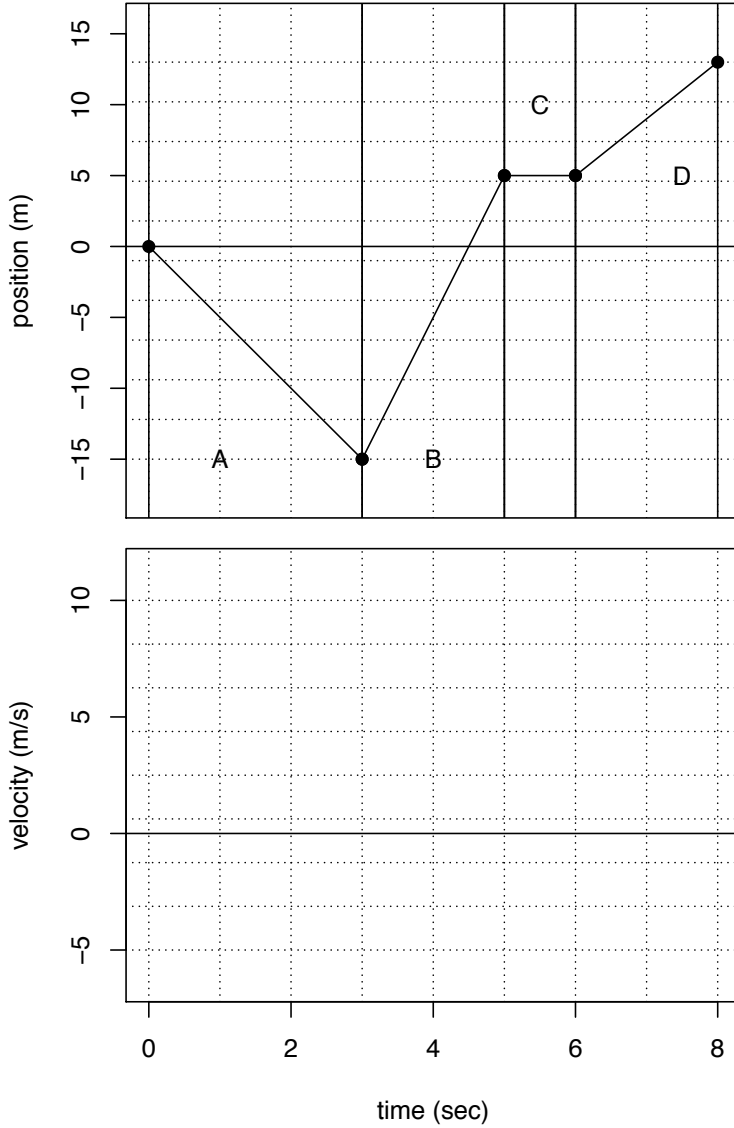
- Find the area under each section of the velocity-time graph.
- Draw the corresponding position-time graph, assuming initial position = 0.



# Question

6

- Find the slope in each section of the position-time graph.
- Draw the corresponding velocity-time graph.



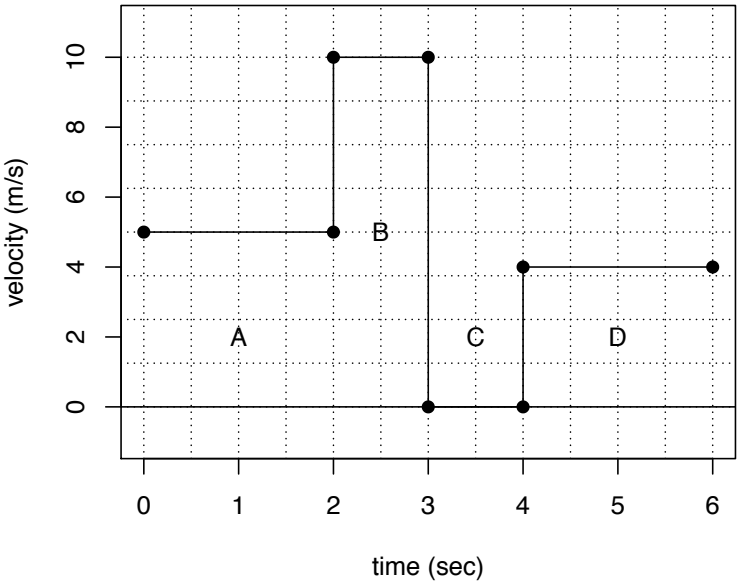
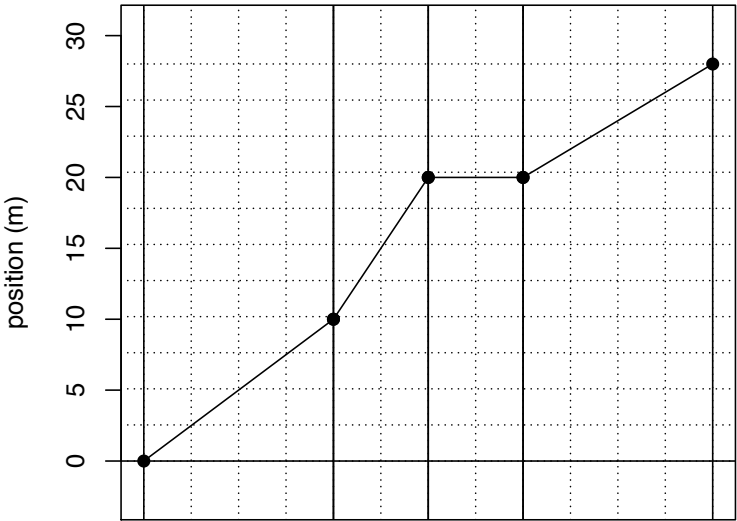
slope of section A

slope of section B

slope of section C

slope of section D

Question 5    Answer



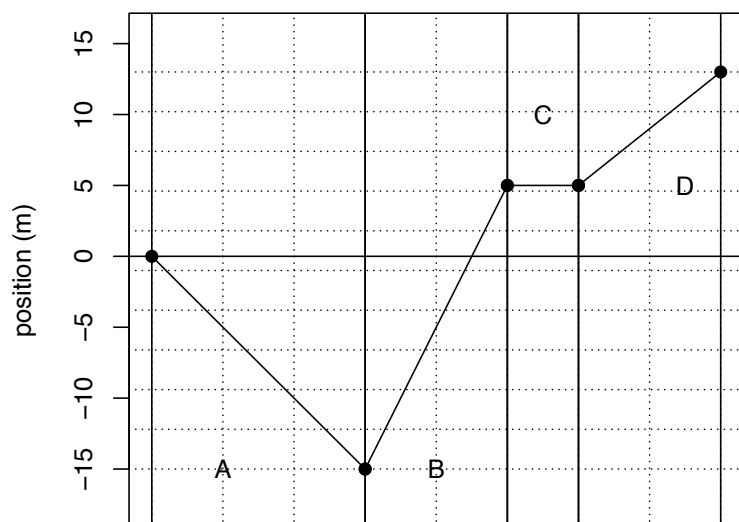
area under section A  
10 m

area under section B  
10 m

area under section C  
0 m

area under section D  
8 m

Question 6 Answer

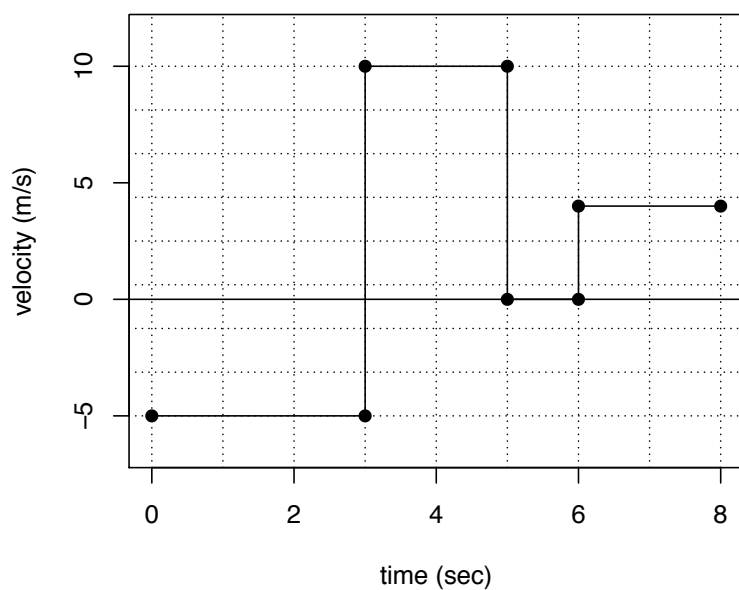


slope of section A  
-5 m/s

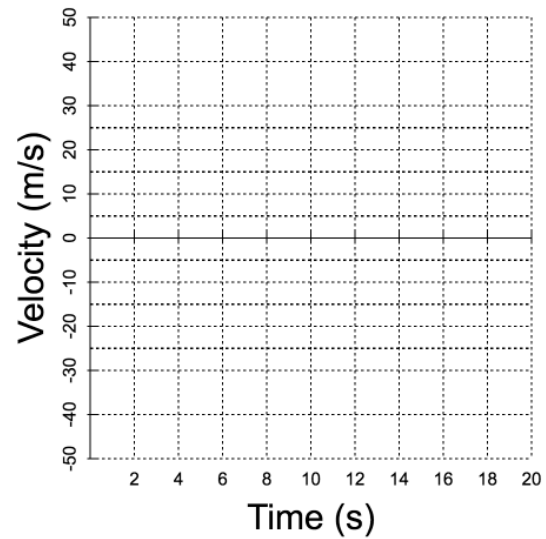
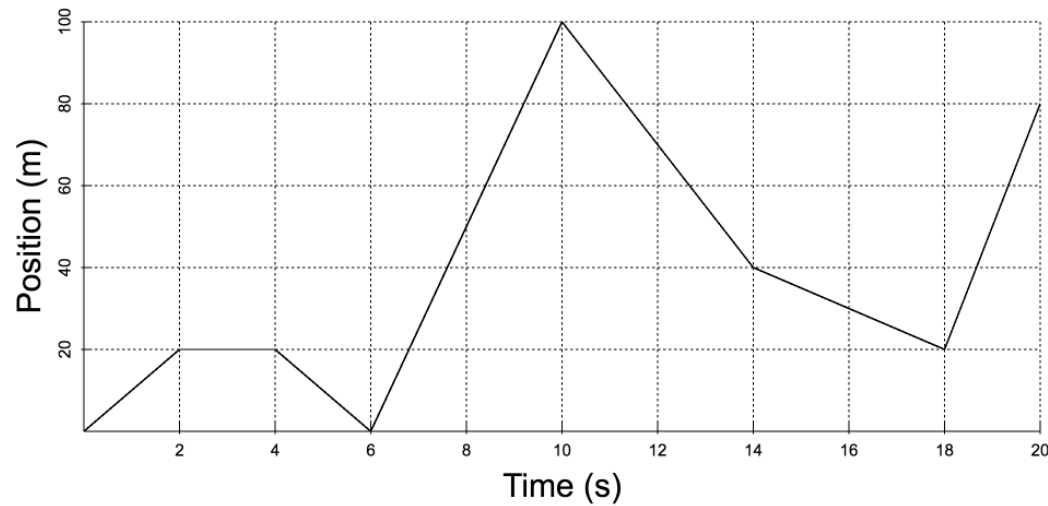
slope of section B  
10 m/s

slope of section C  
0 m/s

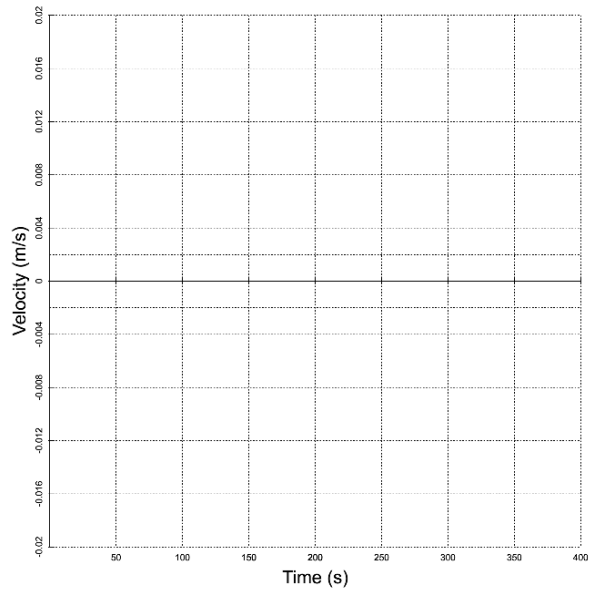
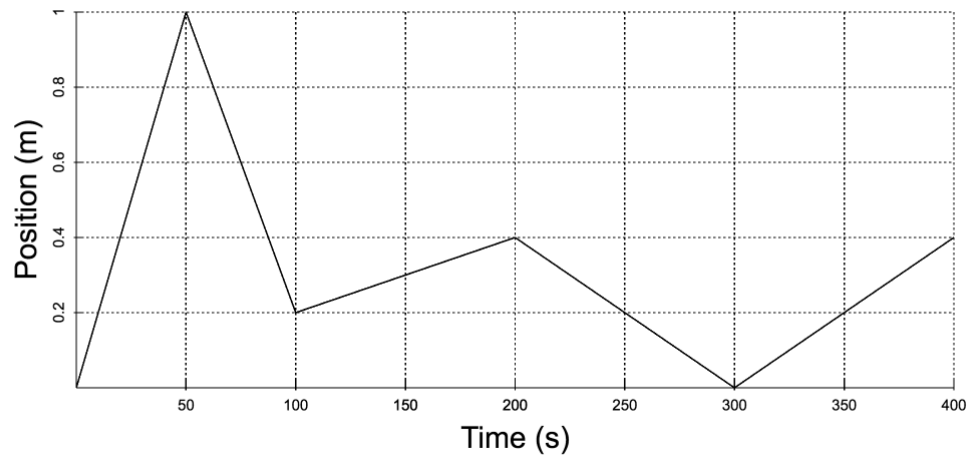
slope of section D  
4 m/s



1. For the following position-time graph, create a velocity-time graph on the next page [4 points]



2. For the following position-time graph, create a velocity-time graph:

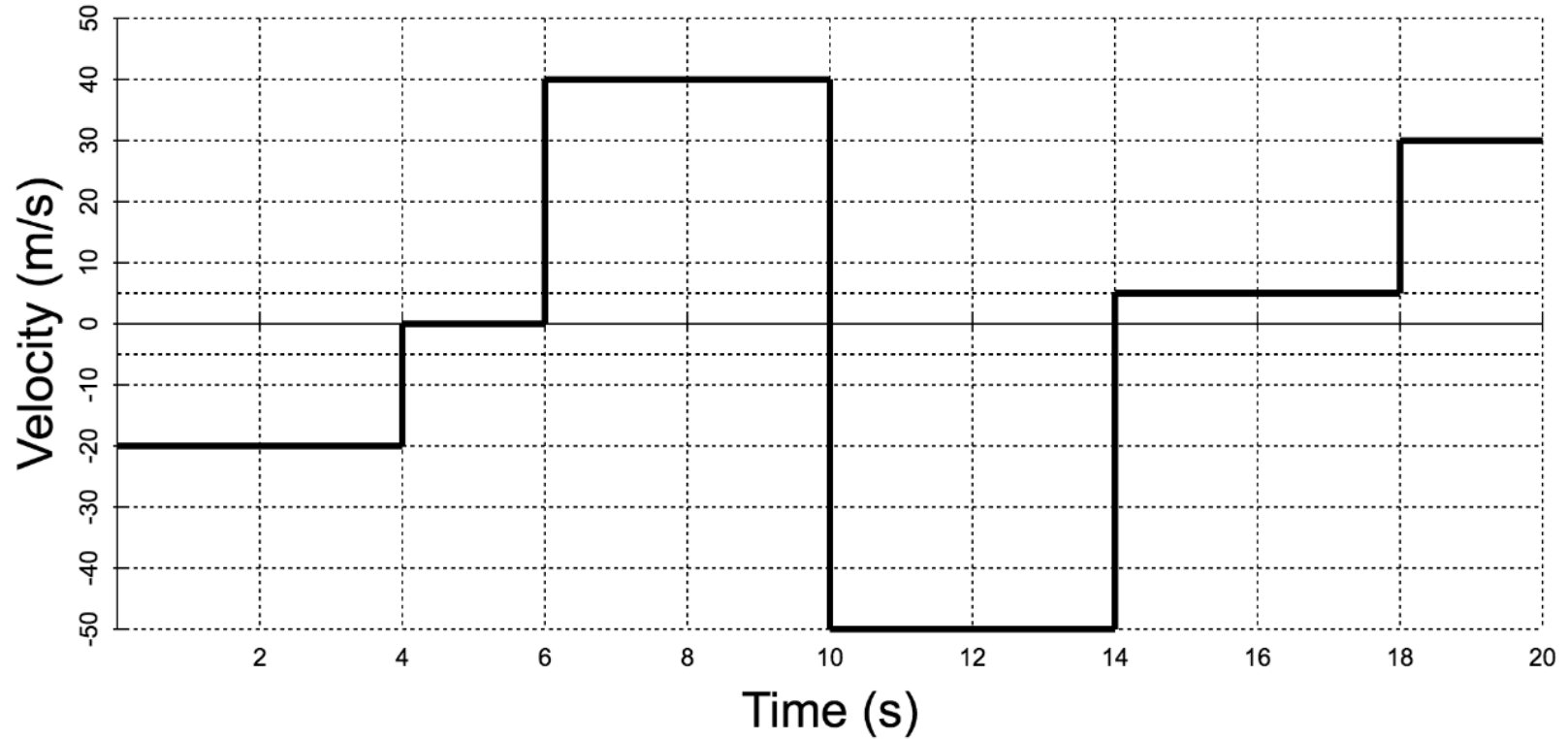


## Quantitative Graphs 2 More Problems

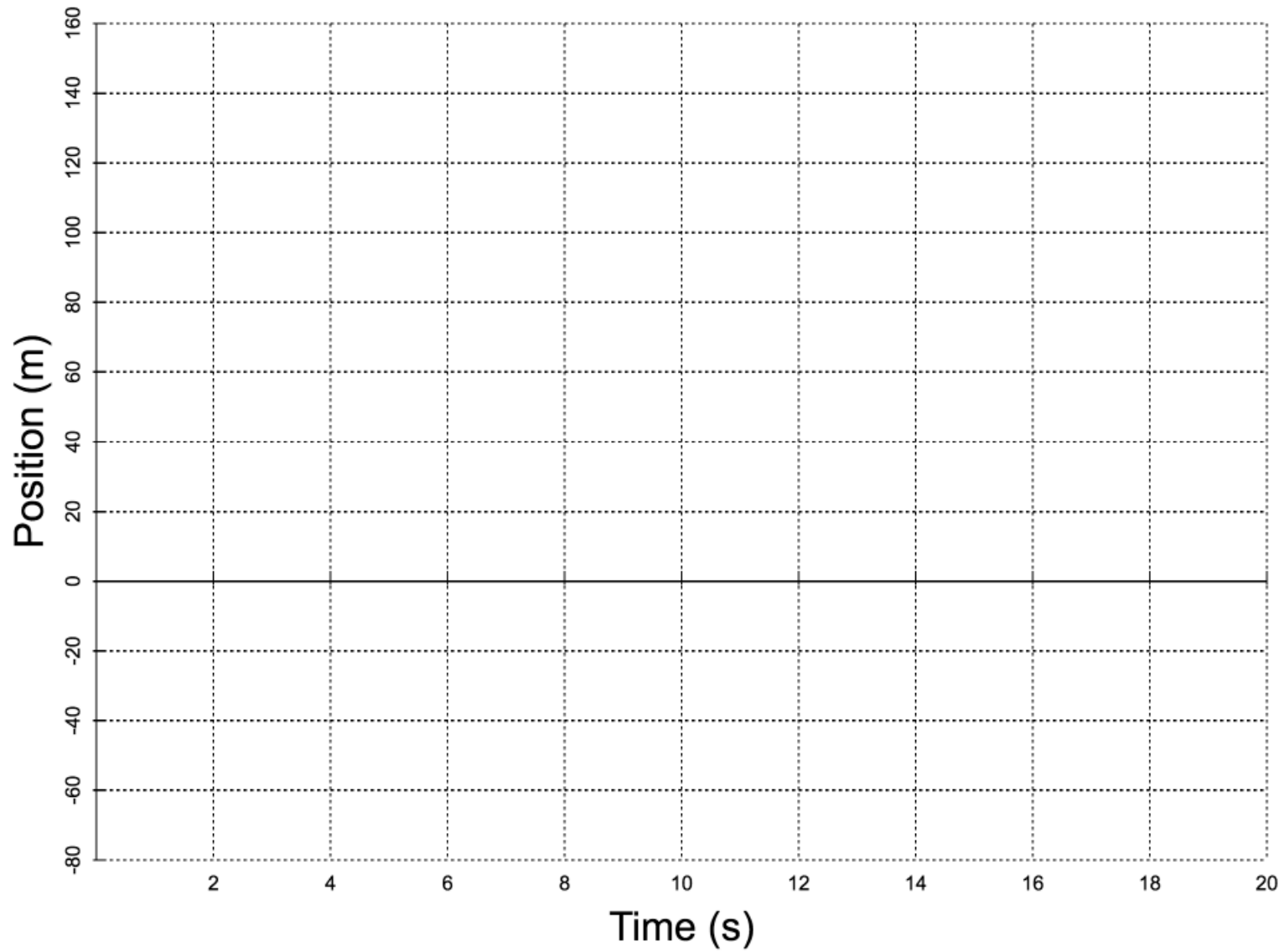
Name \_\_\_\_\_

3. For the following velocity-time graph, create a position-time graph on the next page:

The *initial position* is equal to 60 meters







**5.** Explain, in a few sentences the method used to solve numbers problems 1 and 2. Make sure you refer to the proper *mathematical principle* that you used, and explain the actual steps you took. [2 points]

**6.** Explain, in a few sentences, the method used to solve problems 3 and 4. Make sure you refer to the proper *mathematical principle* that you used, and explain the actual steps you took. [2 points]

## Quantitative Graphs 2 More Problems

Name \_\_\_\_\_

Answers:

**1.**

Time:	Value:
0 - 2	10
2 - 4	0
4 - 6	-10
6 - 10	25
10 - 14	- 15
14 - 18	-5
18 - 20	30

**3.**

points on final graph:

(0, 60)

(4, -20)

(6, -20)

(10, 140)

(14, -60)

(18, -40)

(20, 20)