



7. The speed of a race car driver is shown above. First she is starting from a stop. Then she moves at constant speed and then she gets her tires changed before re-joining the race. Answer questions related to this:
- How long does it take her to get up to full speed?
 - What is her “top speed”?
 - Does it take her longer to brake or to get up to full speed?
 - Assume when she’s braking, she’s moving forward (positive direction). What is her acceleration? What is the magnitude of her acceleration?

More challenging:

- How far does she go each time she speeds up?
- How far does she go while braking?
- How long total does she go at constant speed?
- How far does she go during the portion of her race that she goes at constant speed?
- What is the total distance she travels overall during the race as shown in the graph?
- What is her overall average speed for the time shown in the graph?