

# Speed Detector!

Ms. Kominek and her car were found at the scene of the crime. An excerpt from the official statement is shown below,

**Officer:** Why were you driving in this area?

**Kominek:** I was going to my parking spot; I work here at the school

**Officer:** Do you have any reason to hurt Mrs. Curl?

**Kominek:** Not at all

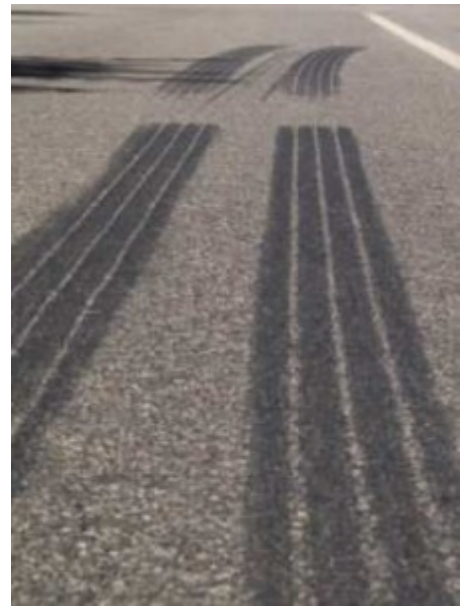
**Officer:** How fast were you driving?

**Kominek:** It was the parking lot, I was only going 10km/h.

**Officer:** Did you hit Mrs. Curl with your car?

**Kominek:** No of course not She was walking along the side then stepped out in front of me and I slammed on the brakes. She was ok when I last saw her. I looked around I saw Mr. Orr and Mr. Roesch. When I looked back she was on the ground!

Evidence Item #1



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The above picture shows Evidence Item #1 a snapshot of the tire mark left when Ms. Kominek “slammed” on her brakes.

Police Analysts have recorded different lengths of tire marks left by cars at various speeds. Table #1 on the right shows the data.

Table #1

On the attached page, the crime scene lab has re-created the tire mark left by Mrs. Kominek’s car.

Help the police out by determining if Ms. Kominek is telling the truth about her speed.

1. Plot the data in a scatter plot.
2. Find an equation to model this data (assume the first entry is the minimum value).
3. Is Ms. Kominek telling the truth? Justify your answer.

Speed (km/h)	Tire Mark (m)
30	3
40	3.92
50	6.67
60	11.25
70	17.67
80	25.92
90	36

4. Tire mark left by Suspect

Scale: 1cm = 0.29m

