

## CPO Lab 2.2: Predict Speed

Name: \_\_\_\_\_

Directions: Use Photogate A and the timer is on interval mode. Make sure the ramp is in the 10th position from the bottom.

### Pre-Lab

1. What is the formula used to calculate speed? \_\_\_\_\_
2. What is the length of the car's wing? \_\_\_\_\_ cm

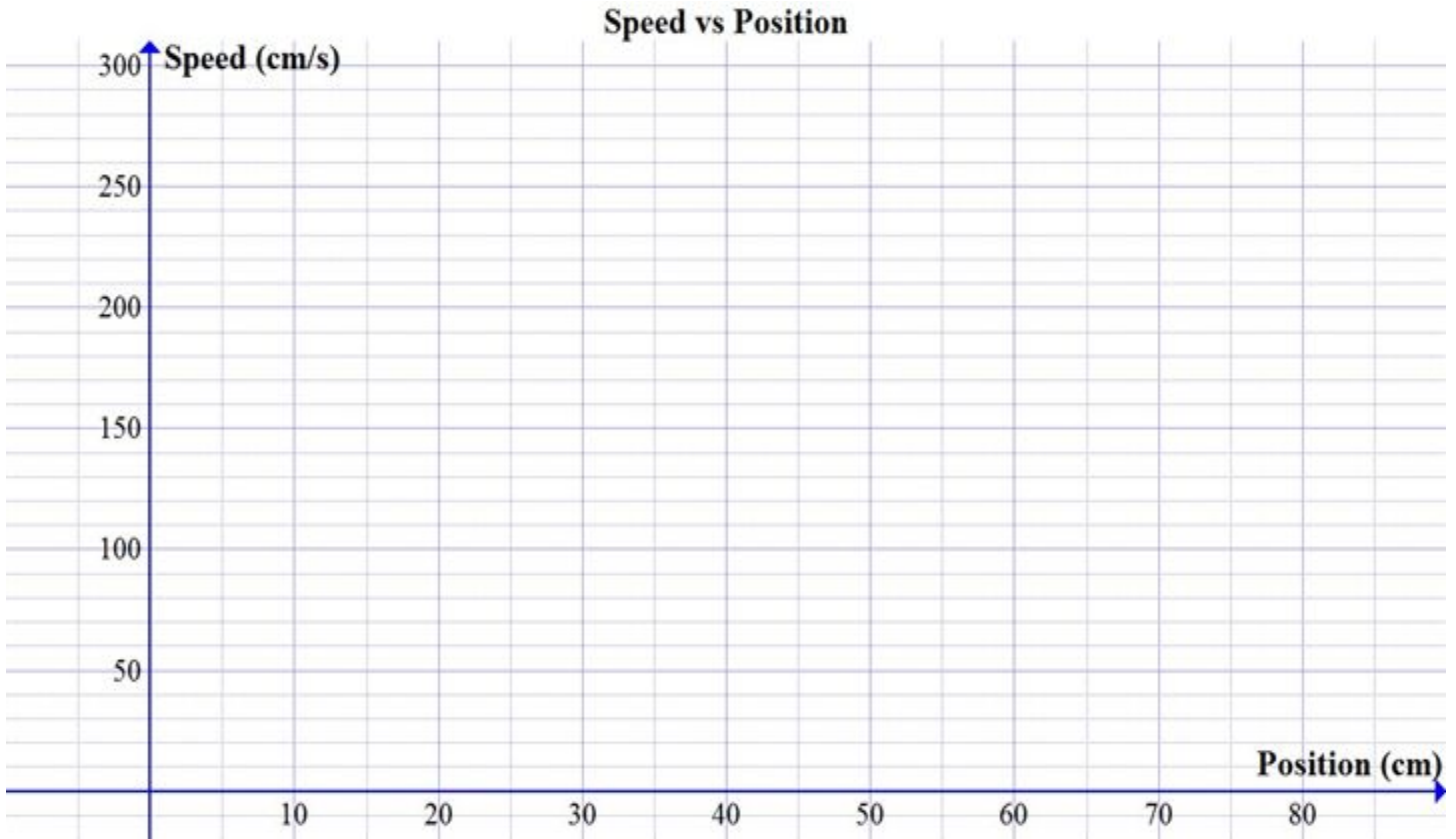
### Data:

| Position of PG A (cm)                                | Time A (sec) | Distance traveled (cm) | Speed of Car (cm/s) |
|--|--------------|------------------------|---------------------|
| 10   |              |                        |                     |
| 20   |              |                        |                     |
| 30   |              |                        |                     |
| 40   |              |                        |                     |
| 50   |              |                        |                     |
| 60   |              |                        |                     |
| 70   |              |                        |                     |
| 80   |              |                        |                     |
| Get the data for 65 centimeters but DO NOT graph it! |              |                        |                     |
| 65   |              |                        |                     |

What is the trend between the position of the photogate and the speed of the car?

How does the speed of the car change as it moves down the ramp?

**Analysis:**



**Conclusion:**

What does the graph show about the speed of the car?

---

---

Use your **graph** to find the predicted speed of the car at 65 cm. Record your predicted speed. \_\_\_\_\_

What was the actual speed of the car at 65 cm (look at your data table) \_\_\_\_\_

How does the predicted speed compare with the actual measured speed?

---

---