An experiment was performed. A toy car was released from the top of a ramp (point A). The time was recorded from the time of release until it reached the bottom of the ramp (point B). Below are the data recorded.

| Trial number	Incline of ramp	Time (of one minute)
1	5 degrees	0.85
2	10 degrees	0.78
3	15 degrees	0.56
4	20 degrees	0.41
5	25 degrees	0.48

1 What is the first question you need to answer before entering in your data?

Which is the input and which is the output ?

2. What is the regressions equation? (Copy decimals to four decimal places.)

$$y = 0.001 x^2 - 0.0522 x + 1.124$$

3. Sketch the graph. Be sure to label and plot 3 points.

Time (minutes)

(15, 56)

(25, 048)

(26.1, 0.44)

Incline of ramp (degrees)
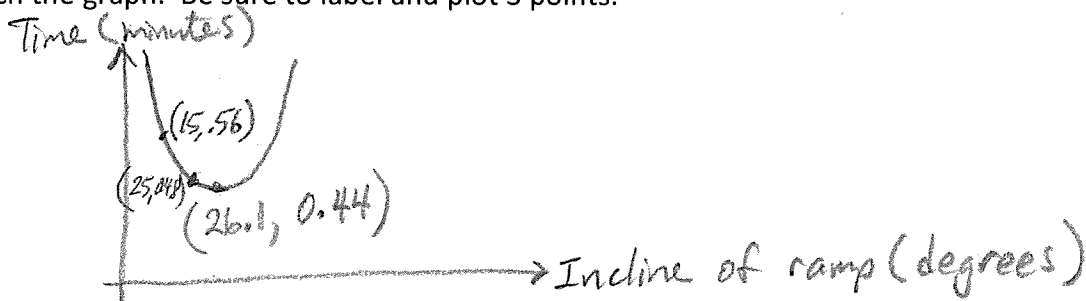
4. What does the graph represent? It represents the function relating the incline of a ramp and the time to travel from A to B.

5. Predict the time it would take the car to travel if the incline was 80 degrees. 3.348 min.

6. Predict the time it would take the car to travel if the incline was 115 degrees. 8.346 min,

At what point does the model become unrealistic? At an incline greater than 25°. It doesn't make sense.

7. What is the incline if the car traveled from point A to point B in 0.95 of a minute? _____

3.57 or 3.58°