

7_Selecting a Regression Model for Data.notebook

Selecting a Regression Model

This table shows how the air pressure in a car tire changes in the first 40 s after the tire is punctured.

Time (s)	Tire pressure (kPa)
0	207
5	186
10	145
15	110
20	90
25	62
30	48
35	41
40	28

Work in a group of 3.

- Enter the data into a graphing calculator. (Refer to section 3.4 if you need help doing this.)
- Have each person fit a different regression model to the data: linear, exponential, or quadratic.
- Compare the regression models. Make sure you've turned the Diagnostic ON so that the r and r^2 values appear.
- Use the model that you think best fits the data to predict the tire pressure:

i) After 12 s

ii) After 45 s

Follow the steps in Example 2 - Do you get the same results?

In your groups, complete Pg. 325 #10, 12-14. At least one copy must be submitted for marking. It must be legible. Include all work and justify your answers.