## MAP4CI : Graphical Models

## Unit 5 Lesson 4

## Quadratic Model : Roller Coaster

| $\begin{aligned} & \hline \text { Distance } \\ & \text { (m) } \end{aligned}$ | Height (m) | 1st Differences | 2nd Differences |
| :---: | :---: | :---: | :---: |
| 0 | 21 |  |  |
| 5 | 14 |  |  |
| 10 | 9 |  |  |
| 15 | 6 |  |  |
| 20 | 5 |  |  |
| 25 | 6 |  |  |
| 30 | 9 |  |  |
| 35 | 14 |  |  |
| 40 | 21 |  |  |

1. Calculate 1st and 2nd differences.
2. Is this relationship quadratic, how can you tell?
3. Plot the data on the given graph.
4. Where is the roller coaster closest to the ground?
