

School Crossing

You need ★ a classmate

Activity

Nathan and Malia are part of their school's crossing patrol team.

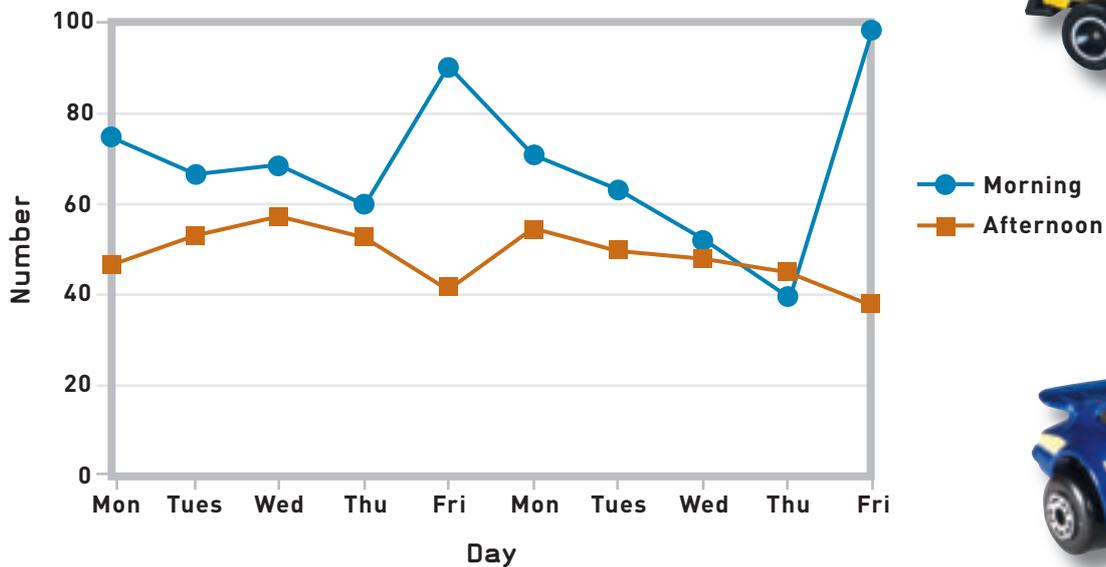
The road seems much busier on some days than on others.

I wonder if we can find a pattern?



Nathan and Malia decide to count the number of cars that pass by between 8.30 and 8.45 a.m. and between 3.00 and 3.15 p.m. over the next 2 weeks. Afterwards, to help them make sense of the data they collected, they create this time-series graph:

Vehicles through Crossing



Nathan and Malia's classmates make these comments about the graph:



i.

Traffic is heaviest on Fridays.

ii.

Mornings are busier than afternoons.

iii.

The mornings were quieter in week 2.

iv.

On one day, there were more vehicles in the afternoon than in the morning.

v.

On Fridays, the morning count is more than double the afternoon count.

vi.

About 60 vehicles passed by each afternoon.

vii.

Most days, the morning and afternoon numbers are not very different.

viii.

Over the 2 weeks, about 1 200 vehicles were counted passing by.

1. Discuss each statement with a classmate until you both either agree or disagree with it and can explain why.
2. Write two more statements based on the graph. Ask your classmate to explain why they are true or false.
3. From the first five statements shown above, choose two that you decided are true and suggest possible explanations for them.
4. Nathan and Malia aren't sure that they can use their data to reach definite conclusions. Suggest what they could do next.

Investigation

With one or more classmates, plan and carry out a similar survey to Nathan and Malia's. Analyse your data with the help of a time-series graph.

What patterns do you notice? What might be the reasons for these patterns?

Focus Recognising patterns in time-series data