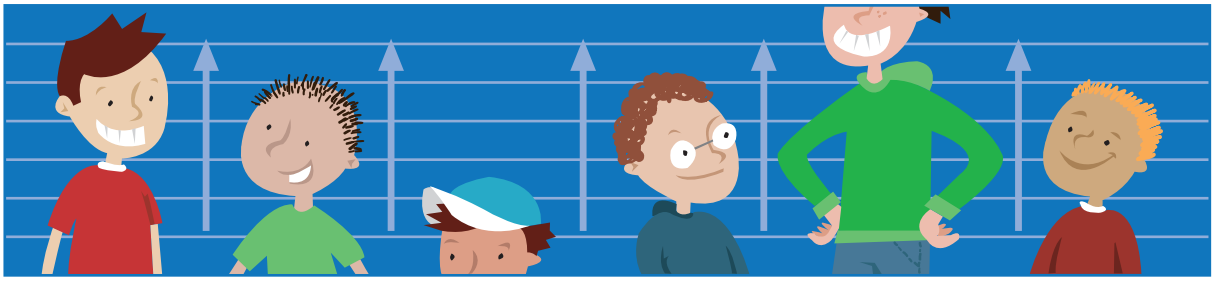
Walking Tall?

ACTIVITY

You need: a calculator, a computer

Louis thinks that the boys who regularly catch the bus or get a ride to school seem shorter than the boys who ride a bike or walk. He collects the following data:

Height (h) in centimetres	Boys who walk or bike	Boys who use a bus or car	Percentage of all walkers and bikers	Percentage of all bus and car users
less than 140	2	2	0.8	
140 ≤ h < 150	23	3	9.2	
150 ≤ h < 160	48	20		
160 ≤ h < 170	75	34		
170 ≤ h < 180	66	23		24.5
180 ≤ h < 190	29	11		
190 ≤ h < 200	8	1		
TOTAL	251	94		



1. a. Enter the data from the first three columns into a computer spreadsheet.
   b. Create a line graph that shows both groups of boys on the same set of axes.
   c. Does your graph support Louis's hypothesis? Explain your reasoning.

A **hypothesis** is an idea or theory that can be investigated using maths or science.

2. a. Divide the number of boys from each height group by the total number in that transport group to get the percentages for the last two columns.
   b. Use the data from the first column and the last two columns to create a line graph that shows both groups of boys on the same set of axes.
   c. Explain how this graph supports, or does not support, Louis's hypothesis.

3. Conduct a similar investigation of your own for one of these hypotheses:
   - People who walk to school have bigger shoes than those who don't.
   - People who walk to school run faster than those who don't.
   - People who walk to school leave home earlier than those who don't.