



"The Pied Piper of Hamelin" is a story you may have heard or read. This man, who is often dressed in very bright colours, drives the many rats out of town by his pipe playing - and the children follow his tune.

Suppose that there were 100 children and 100 rats. Supposing they all have the usual number of legs, there will be 600 legs in the town belonging to people and rats.

But now, what if you were only told that there were 600 legs belonging to people and rats but you did not know how many children/rats there were?

The challenge is to **investigate how many children/rats there could be if the number of legs was 600**. To start you off, it is not too hard to see that you could have 100 children and 100 rats; **or** you could have had 250 children and 25 rats. See what other numbers you can come up with.

Remember that you have to have 600 legs altogether and rats will have 4 legs and children will have 2 legs.

When it's time to have a look at all the results that you have got and see what things you notice you might write something like this:

1. 100 Children and 100 Rats - the same number of both,
2. 150 Children and 75 Rats - twice as many children as rats,
3. 250 Children and 25 Rats - ten times as many children as rats.

This seems as if it could be worth looking at more deeply. I guess there are other things which will "pop up", to explore.

Then there is the chance to think about the usual question, "I wonder what would happen if ...?"