

*Using Algebra, functions & graphs***Circuit Boards**

A manufacturer has two machines which produce circuit boards. They want to know which machine is most cost efficient for producing the boards. Below are the outline costs for each machine.

Machine A

Initial programming cost of £35 and a further cost of 25p per circuit board.

Machine B

Programming cost of £50 and a cost of 17.5p per circuit board.

Task

For each machine investigate how the cost varies depending on the number of boards the manufacturer wishes to produce.

Make recommendations for which machine they should use in different circumstances.

Present your findings in terms of a word-processed report. You should use graphical and algebraic techniques to present your findings.

Equipment

You will need:-

- Paper, graph paper
- Rulers, pens, pencils
- Calculator
- Computer disk
- Access to Microsoft Word & Excel

HELP: If you do not know where to start, ask your teacher for the guidance sheet.



*Using Algebra, functions & graphs***Guidance Sheet - Circuit Boards**

1. Start by trying some examples for each machine.
e.g. Find out how much it costs to produce 50 boards, 100 boards, 150

2. Put your results into a table for each machine.

No. of boards	50	100	150	e.t.c.
Cost (£)				

3. Plot graphs for each machine on one sheet of graph paper. What do your graphs show ? (Comment on gradients, intercepts

4. Now try and put the costs for each machine into algebra.

This is designed to start you off - you should be able to take the investigation further.

