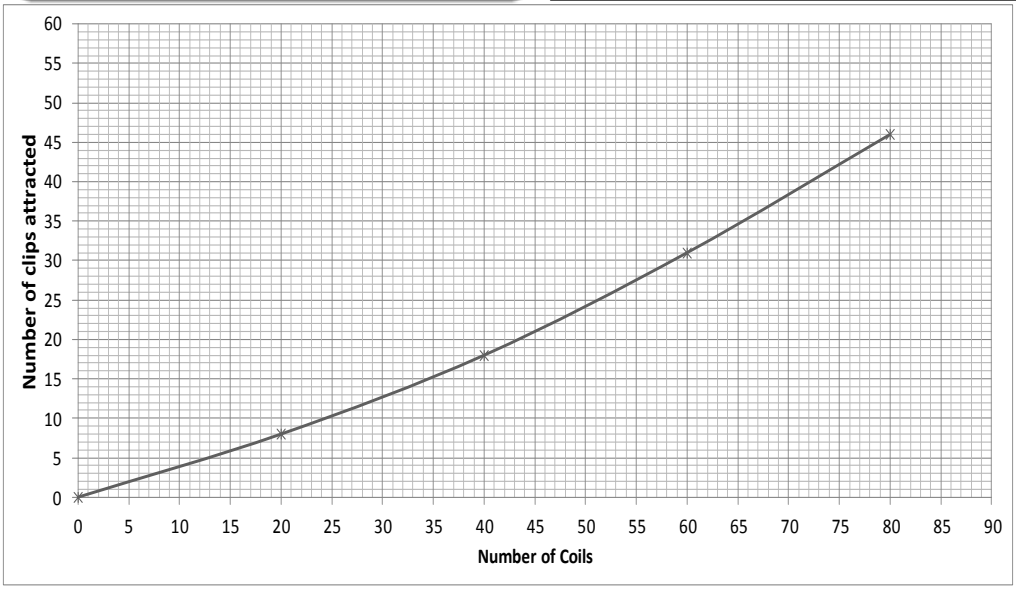
Electromagnet Homework

These two homework tasks are intended to test and help you practice your graph skills. The first homework task will ask you to read a graph and fill in a results table. The second task will ask you to draw a line graph using a set of sample results.



Task One

1. Copy the results table onto your piece of graph paper.
2. Look at the graph showing the results of an experiment where the number of coils on an electromagnet is changed..
3. Use the graph to fill in your results table showing how many paper clips were attracted. You will need to use the graph to estimate the results for 90 coils.

Number of coils	Number of paper clips attracted
0	
20	
40	
60	
80	
90	

You will need graph paper for this question.

Danny made and tested an electromagnet. The data in the table shows the number of paperclips lifted by his electromagnet.

Current (A)	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0
Number of clips lifted	12	19	29	32		60	0	80

a Plot the data as a line graph.

b Use the graph to find out the number of paper clips that can be lifted with a current of 2.5 A. You must show, on the graph, how you obtained your answer.

c What do we call a result like the one at 3.5 A?

d Other than increasing the current even more, what could Danny do to make his electromagnet stronger still?