

Draw a table

# On the farm

***In the farmyard there are some pigs and some chickens. There are 87 animals and 260 legs. How many pigs are there in the farmyard?***

Making a table is a more sophisticated strategy.  
It means using a systematic approach to the guessing element of the problem.

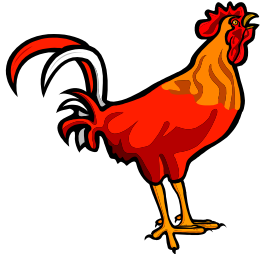
| pigs | legs | chickens | legs | total | diff |
|------|------|----------|------|-------|------|
| 50   | 240  | 37       | 74   | 274   |      |
| 49   | 196  | 38       | 76   | 272   | 2    |
| 48   | 192  | 39       | 78   | 270   | 2    |
| 47   | 188  | 40       | 80   | 268   | 2    |
| 46   | 184  | 41       | 82   | 266   | 2    |
| 45   | 180  | 42       | 84   | 264   | 2    |
| 44   | 176  | 43       | 86   | 262   | 2    |
| 43   | 172  | 44       | 88   | 260   |      |

However recognising, interpreting and using the pattern to find a solution is a different skill.

So from the above table the more able problem solver would recognise a developing pattern by the 48 pigs line and be able to calculate how many fewer pigs would be needed thus omitting 47 to 44

With smaller numbers and fewer limits making an organised list of multiples would be a good strategy.

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How do you know if your answers are getting better?

Makes sure children record their answers and keep comparing to them to the target number

How could you record the answers to your guesses so you could spot any patterns?

This establishes the need to be able to see the results clearly and compare them it also establishes that it might take some time!

Could you use what you find out to make predictions?

This underlines the potential for taking short cuts by using knowledge of pattern

Does your final answer match the information you were given?

This makes sure that children relate their answer to the question and check it for relevance or errors