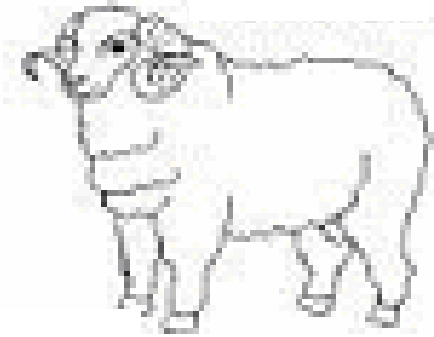


Sheep and Chickens

Fred looked at the sheep and chickens in a field.
He counted 26 legs.



- How many sheep could there be?
- How many chickens could there be?
- How will you know you have found all possible answers?
- Choose a larger number of legs - how many sheep and chickens would there be?

Learning and Teaching Objectives

- Have a system for finding all possibilities
- Organise the recording of results (list, table)
- Use a method for tracking what has been included and what has not
- Have a way of deciding when all possibilities have been found

Sheep and Chickens Solution

	Sheep legs	Chicken legs
1	4	2
2	8	4
3	12	6
4	16	8
5	20	10
6	24	12
7		14
8		16
9		18
10		20
11		22
12		24
13		26

Check through to find a sheep number added to a chicken number to make 26 legs

$0 + 26 \rightarrow 0$ sheep, 13 chickens)

$4 + 22 \rightarrow 1$ sheep , 11 chickens

$8 + 18 \rightarrow 2$ sheep , 9 chickens

$12 + 14 \rightarrow 3$ sheep , 7 chickens

$16 + 10 \rightarrow 4$ sheep , 5 chickens

$20 + 6 \rightarrow 5$ sheep, 3 chickens

$24 + 2 \rightarrow 6$ sheep , 1 chicken

This systematic approach proves all solutions have been found