

# ERIC THE SHEEP



What we had to do:

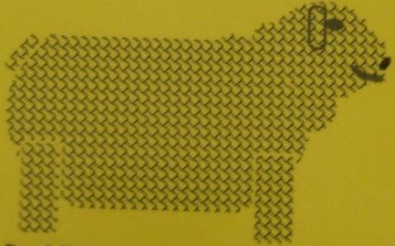
**ERIC THE SHEEP**

**MATERIALS**

One sheep - this is Eric  
Fifty [50] counters to stand for the other sheep

Eric the sheep is lining up to be shorn before the hot summer ahead. There are fifty [50] sheep in front of him. Eric can't be bothered waiting in the queue properly, so he decides to sneak towards the front.

Every time 1 sheep is taken to be shorn, Eric then sneaks past 2 sheep. How many sheep will be shorn before Eric?



Baa! I'm not waiting around for this mob.

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Eric & Friends

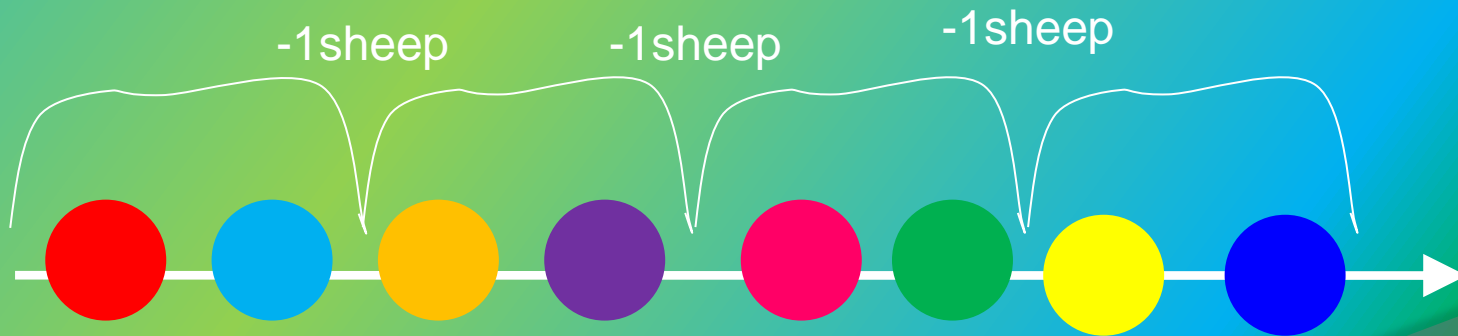
eric



These represent his friends.



We first placed 50 counters on the table with Eric at the end we moved one counter from the start of the line and moved Eric up 2 sheep. This process was repeated until Eric was at the front. The counters that had been moved were counted.



Number of sheep	Divided by 3	Answer
1	0.3333333333333333	1
2	0.6666666666666666	1
3	1	1
4	1.3333333333333333	2
5	1.6666666666666666	2
6	2	2
7	2.3333333333333333	3
8	2.6666666666666666	3
9	3	3
10	3.3333333333333333	4
11	3.6666666666666666	4
12	4	4

# Strategies

Our first strategy was to start with only one sheep and record the results. We then added another sheep to the equation this made 2 sheep. We repeated the process until we had 21 sheep in total (enough evidence).



Sample  
Table on  
the next  
slide.



Sheep in front of Eric	Sheep shawn
1	1
2	1
3	1
4	2
5	2
6	2
7	3
8	3
9	3
10	4
11	4
12	4

# Patterns

The pattern we found was interesting. We recognised the number of sheep followed a pattern of 3 (every three sheep the number increased by 1) we investigated further. And found this rule. If you use this rule no matter what number you pick the answer will be right.

Number divided by 3 rounded to the next number

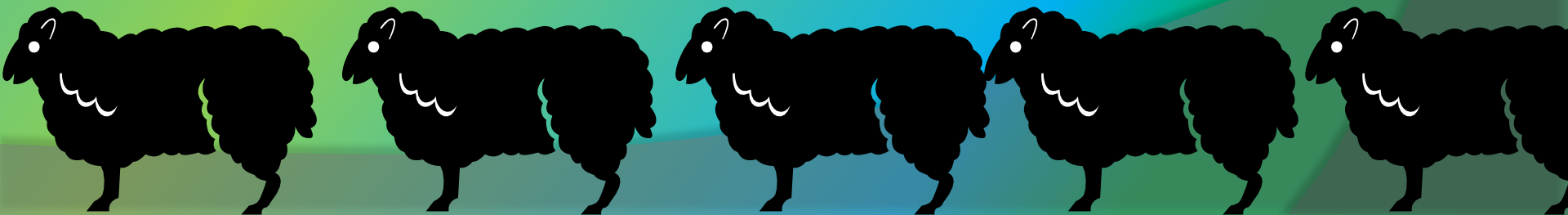
EG.

1000 sheep =  $333.333333$  or 334

1000000 sheep =  $333333.3333333$  or 333334

# Problems

The only problem we faced was not being able to explain the pattern found.





# What if?

He jumped more than one sheep or he jumped when 2 sheep had been shawn not 1?

- would the formula (rule) be the same?
- what would the new pattern be?
- would there still be a pattern?

BY Emma and  
Tiana!!!