

**Sarah, Danielle and Sally said:**

“We noticed that 17 works as when there are only two of them they get 8 each, with one left over. But when their friends come along they get three each with 2 left over.

We also notice that 7 works and 27 works, as well as 107.”

**Poppy began like this:**


If the two children end up with one lolly it must be an odd number of lollies. Then 3 more children come making the total number of children 5. Say they had 1 lolly each when they shared them, the number of lollies would be 7 because 1 times 5 is 5 add on 2 for the left over ones and it makes seven.


If we carry this on to 10 lollies each it shows:

- 1 lolly each- 7 lollies
- 2 lollies each- 12 lollies
- 3 lollies each- 17 lollies
- 4 lollies each- 22 lollies
- 5 lollies each- 27 lollies
- 6 lollies each- 32 lollies
- 7 lollies each- 37 lollies
- 8 lollies each- 42 lollies
- 9 lollies each- 47 lollies
- 10 lollies each- 52 lollies

**Here is the start of Phoebe and Alice’s work (PTO):**

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

 Brown = Odd numbers.

 Green = 2 left over when shared with 5 people.

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**Can you take each of these starting ideas and develop them into a solution?**