Roberta and Rodney

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The Busy Lizzie Maths Library

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Roberta and Rodney

Two rabbits, Rodney and Roberta, were playing a game on a number line. Rodney can jump three numbers at a time and Roberta can only jump two.

Rodney started at 1 and Roberta started off at 30. If they both jumped together, who got to 100 first and how long did they have to wait for the other one?

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One method could be to draw a table or a number line and record each jump.

Another method would be to calculate how many 2s or 3s there are in the remaining distance (numbers) to jump, e.g. Roberta 100 – 30 = 70, divide 70 by 2 (size of jump) and it will give you how many jumps it will take to get to 100, 35 jumps.

Now take Rodney, 100 – 1 = 99 and divide it by 3 = 33 jumps

Therefore, Rodney gets to 100 quicker than Roberta.

Take away Rodney's jumps from Roberta's to calculate how long Rodney would have to wait, 35 – 33 = 2. Rodney would have to wait for Roberta to do 2 more jumps.

Jump number	Roberta		Rodney	
	Start number	30	Start number	1
1	+2	32	+3	4
2	+2	34	+3	7
3	+2	36	+3	10
4	+2	28	+3	13
5	+2	40	+3	16
6	+2	42	+3	19
7	+2	44	+3	22
8	+2	46	+3	25
9	+2	48	+3	28
10	+2	50	+3	31
11	+2	52	+3	34
12	+2	54	+3	37
13	+2	56	+3	40
14	+2	58	+3	43
15	+2	60	+3	46
16	+2	62	+3	49
17	+2	64	+3	52
18	+2	66	+3	55
19	+2	68	+3	58
20	+2	70	+3	61
21	+2	72	+3	64
22	+2	74	+3	67
23	+2	76	+3	70
24	+2	78	+3	73
25	+2	80	+3	76
26	+2	82	+3	79
27	+2	84	+3	82
28	+2	86	+3	85
29	+2	88	+3	88
30	+2	90	+3	91
31	+2	92	+3	94
32	+2	94	+3	97
33	+2	96	+3	100
34	+2	98		
35		100		The winner