## Staircase Capers

You need **Z** a photocopy of the staircases

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-	Š		5	6	7	8	9				
	9	10	11	12	13	14	15	16	1		
<b>4</b>	7	18	19	20	21	22	23	24	25		
26 2	27	28	29	30	31	32	33	34	35	36	

Mark some four- or six-block rectangles on your copy of this staircase.

Add the pairs of numbers in opposite corners of the rectangles.

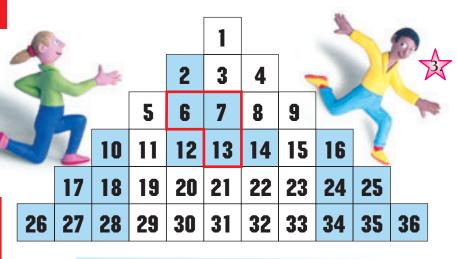
What do you notice (for example, in  $2 + 7 = \square$  and  $3 + 6 = \square$ )?

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				2	3	4	-		1.	1	Λ 2
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		10	11	12	13	14	15	16	1	No.	
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26	27	28	29	30	31	32	33	34	35	36	

Mark crosses on your copy of this staircase.

Add numbers at opposite ends of the cross (for example,  $2 + 12 = \square$  and  $5 + 7 = \square$ ).

What do you notice?



Mark out little staircases on your copy of this staircase.

Make some right-hand staircases and some left-hand staircases.

Add the numbers at the corners (for example,  $2 + 12 + 14 = \square$ ). Add the other three numbers (for example,  $6 + 7 + 13 = \square$ ).

What do you notice?

## Investigation

Can you find any other patterns?

Discuss your patterns with a classmate. Do they work?