

SUBJECT Maths

TERM Autumn second half

YEAR GROUP
10

CONTEXT
Investigational Task

OBJECTIVE
Use investigational approach to spot patterns and find general terms

ASSESSMENT
Teacher

TASK
Complete 'T-Shape Investigation.PDF'

RESOURCES
attached

EXAMPLE/MODEL
Given on Worksheet

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Looking at this T-shape drawn on a 9 by 9 number grid

The total of the numbers inside the T-shape is $1 + 2 + 3 + 11 + 20 = 37$.

This is called the **T-total**.

The number at the bottom of the T-shape is called the **T-number**.

The T-number for this T-shape is 20.

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

Translate the T-shape to different positions on the grid.

- 1) Investigate the relationship between the T-total and the T-number.
- 2) Use grids of different sizes. Translate the T-shape to different positions. Investigate relationships between the T-total, the T-numbers and the grid size.
- 3) Use grids of different sizes again. Try other transformations and combinations of transformations. Investigate relationships between the T-total, the T-numbers, the grid size and the transformations.