Resource sheet 9.7

Part A

- Lightly shade a square block of four numbers in this number grid.
- Now use the four numbers in the block you have shaded to complete these steps.
    1. Multiply the number in the bottom left square by the number in the top right square.
    2. Multiply the number in the top left square by the number in the bottom right square.
    3. Subtract the second answer from the first.
- Repeat steps 1, 2 and 3, using a different square of four lightly shaded in numbers.
- Write down what you notice about your last two answers.

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16
17	18	19	20

This block of four numbers represents a block of four numbers from the number grid.

- Write an expression, in terms of n, in each of the other squares to represent the missing numbers.
- Repeat steps 1, 2 and 3, using these expressions.
- Write down what you notice about your answer.

n	

Part B

Repeat the activity in Part A, using this number grid.

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

Part C

Repeat the activity in Part A, using this number grid.

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

Part D

Without any working, write down what would you expect to notice if you repeated the activity in Part A using this number grid? Use algebra to explain your answer.

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