

Number Patterns

Exercise 1

Copy these sequences into your jotter and write down the next 2 numbers

- | | | |
|---------------------------------|---------------------------------|---------------------------------|
| 1 1, 2, 3, 4, | 2 2, 4, 6, 8, | 3 3, 5, 7, 9, |
| 4 1, 4, 7, 10, | 5 5, 8, 11, 14, | 6 7, 11, 15, 19, |
| 7 23, 22, 21, 20, | 8 19, 17, 15, 13, | 9 41, 43, 45, 47, |
| 10 32, 34, 36, 38, | 11 16, 19, 22, 25, | 12 17, 20, 23, 26, |
| 13 39, 36, 33, 30, | 14 51, 48, 45, 42, | 15 21, 25, 29, 33, |
| 16 52, 56, 60, 64, | 17 4, 5, 6, 7, | 18 9, 10, 11, 12, |
| 19 4, 6, 8, 10, | 20 6, 9, 12, 15, | 21 10, 15, 20, 25, |
| 22 5, 7, 9, 11, | 23 8, 11, 14, 17, | 24 21, 19, 17, 15, |
| 25 36, 30, 24, 18, | 26 10, 13, 16, 19, | 27 23, 19, 15, 11, |

Exercise 2

Copy these sequences into your jotter and write down the next 2 numbers

- | | |
|---|---|
| 1 19, 26, 33, 40, 47, | 2 73, 62, 51, 40, 29, |
| 3 19, 30, 41, 52, 63, | 4 49, 41, 33, 25, 17, |
| 5 $\frac{1}{2}$, 1, $1\frac{1}{2}$, 2, $2\frac{1}{2}$, | 6 8, $7\frac{1}{2}$, 7, $6\frac{1}{2}$, 6, |
| 7 0.2, 0.9, 1.6, 2.3, 3.0, | 8 7.6, 6.5, 5.4, 4.3, 3.2, |
| 9 13, 26, 39, 52, 65, | 10 95, 80, 65, 50, 35, |
| 11 $\frac{1}{4}$, $\frac{1}{2}$, $\frac{3}{4}$, 1, $1\frac{1}{4}$, | 12 $\frac{1}{2}$, 2, $3\frac{1}{2}$, 5, $6\frac{1}{2}$, |
| 13 1, 3, 6, 10, 15, | 14 1, 4, 9, 16, 25, |
| 15 2, 4, 8, 14, 22, | 16 1, 4, 10, 19, 31, |

17 4, 7, 12, 19, 28, ..., ...

19 0, 4, 12, 24, 40, ..., ...

21 41, 30, 21, 14, 9, ..., ...

23 1, 2, 4, 8, 16, ..., ...

25 3, 6, 12, 24, 48, ..., ...

18 0, 5, 15, 30, 50, ..., ...

20 22, 17, 13, 10, 8, ..., ...

22 18, 25, 31, 36, 40, ..., ...

24 1, 3, 9, 27, 81, ..., ...

26 320, 160, 80, 40, 20, ..., ...

Exercise 3

For each question:

a Copy and complete the table

b Write down the **rule** for the table

1

A	1	2	3	4	5	6		12
B	3	5	7					

2

C	1	2	3	4	5	6		10
D	2	5	8					

3

E	1	2	3	4	5	6		11
F	4	7	10					

4

G	1	2	3	4	5	6		20
H	3	7	11					

5

I	1	2	3	4	5	6		12
J	5	7	9					

6

K	1	2	3	4	5	6		10
L	2	6	10					

7

M	1	2	3	4	5	6		9
N	1	4	7					

8

P	1	2	3	4	5	6		12
Q	7	11	15					

9

R	1	2	3	4	5	6		20
S	4	9	14					

10

T	1	2	3	4	5	6		11
V	0	3	6					

11

W	1	2	3	4	5	6		13
X	8	11	14					

12

Y	1	2	3	4	5	6		10
Z	8	13	18					

Exercise 4

For each question:

- Copy and complete the table
- Write down the **formula** which works for the table

1

A	1	2	3	4	5	6		30
B	5	8	11					

2

C	1	2	3	4	5	6		25
D	6	8	10					

3

E	1	2	3	4	5	6		50
F	1	3	5					

4

G	1	2	3	4	5	6		100
H	1	4	7					

5

J	1	2	3	4	5	6		60
K	4	7	10					

6

L	1	2	3	4	5	6		25
M	5	9	13					

7

N	1	2	3	4	5	6		30
P	4	9	14					

8

Q	1	2	3	4	5	6		40
R	1	5	9					

9

S	1	2	3	4	5	6		35
T	7	9	11					

10

U	1	2	3	4	5	6		40
V	7	12	17					

11

W	1	2	3	4	5	6		15
X	7	11	15					

12

Y	1	2	3	4	5	6		50
Z	6	12	18					