

Linking Patterns with Tables

Connections can be found between some of the **times tables**.
Here is the **3 times** table linking with part of the **9 times** table.

Recognise patterns in times tables

| |
|--------------------|
| $3 \times 1 = 3$ |
| $3 \times 2 = 6$ |
| $3 \times 3 = 9$ |
| $3 \times 4 = 12$ |
| $3 \times 5 = 15$ |
| $3 \times 6 = 18$ |
| $3 \times 7 = 21$ |
| $3 \times 8 = 24$ |
| $3 \times 9 = 27$ |
| $3 \times 10 = 30$ |

| |
|-------------------|
| $9 \times 1 = 9$ |
| $9 \times 2 = 18$ |
| $9 \times 3 = 27$ |

or

| |
|----------------------------|
| $3 \times 3 \times 1 = 9$ |
| $3 \times 3 \times 2 = 18$ |
| $3 \times 3 \times 3 = 27$ |

Exercise 2

1. Look at this multiplication chart.

The line shaded **brown** shows the answers to the **2 times** table.

- a What times table does the **green** line show the answers to?
- b Describe the number pattern for the :-
- (i) **blue** line
 - (ii) **red** line
 - (iii) **pink** line
 - (iv) **purple** line.

| X | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|----|----|----|----|----|----|----|----|
| 1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 2 | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 |
| 3 | 3 | 6 | 9 | 12 | 15 | 18 | 21 | 24 | 27 |
| 4 | 4 | 8 | 12 | 16 | 20 | 24 | 28 | 32 | 36 |
| 5 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 |
| 6 | 6 | 12 | 18 | 24 | 30 | 36 | 42 | 48 | 54 |
| 7 | 7 | 14 | 21 | 28 | 35 | 42 | 49 | 56 | 63 |
| 8 | 8 | 16 | 24 | 32 | 40 | 48 | 56 | 64 | 72 |
| 9 | 9 | 18 | 27 | 36 | 45 | 54 | 63 | 72 | 81 |

Recognise patterns in multiplication tables.

$\square = 9$

$\square = 18$

$\square = 27$

9

9

18

27

36

45

- a Make a copy of the multiplication chart shown in question 1 and mark on it with coloured pencils any other number patterns that you can find.
- b Describe each of the number patterns you have found.

Worksheet
13-1

- 3 a Copy and complete the 2 times table and the 4 times table shown below.

$2 \times 1 = 2$

$2 \times 2 = 4$

$2 \times 3 = 6$

$2 \times 4 = 8$

$2 \times 5 = 10$

$2 \times 6 = 12$

$2 \times 7 = 14$

$2 \times 8 = 16$

$2 \times 9 = 18$

$2 \times 10 = 20$

$4 \times 1 = 4$

$4 \times 2 = 8$

$4 \times 3 = 12$

or $2 \times 2 \times 1 = 4$

or $2 \times 2 \times 2 = 8$

or $2 \times 2 \times 3 = 12$

\square

- b Copy and fill in the yellow box for $2 \times 2 \times 4 = 16$.
- c Now draw a box for $2 \times 2 \times 5 = ?$ and complete it.
- d Can you see a link between the 2 and 4 times tables?
Explain this link.

- 4 a Write out the 4 and the 8 times tables.
- b Explain the link between these two tables.