

# Multiplication squares

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*The Busy Lizzie Maths Library*

## Multiplication square

You will need...

- a multiplication square (10 x 10)
- strips of paper to cover rows or columns

Write or print a multiplication square onto a piece of paper.

Please note: This does not teach fractions, ratio and proportion but it is an interesting activity for children and shows the links between different areas of mathematics.

# Multiplication square

Write out or print out a multiplication square like this one.

If you are writing one onto a piece of paper, try to make sure your columns and rows in line.

X	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

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# Multiplication square

Cover the lower part of the multiplication square. Read the two rows as fractions.

These two rows will give you some equivalent fractions to one half.

X	1	2	3	4	5	6	7	8	9	10
	2	4	6	8	10	12	14	16	18	20

One half is equivalent to...

Two quarters  $\frac{2}{4}$

Three sixths  $\frac{3}{6}$

Four eighths  $\frac{4}{8}$

Five tenths  $\frac{5}{10}$

Six twelfths  $\frac{6}{12}$

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# Multiplication square

Cover the second row and the rows below the multiples of 3.

Paper versions can be folded so that these rows are clearly visible.

Read these rows as fractions equivalent to thirds.

x	1	2	3	4	5	6	7	8	9	10
	3	6	9	12	15	18	21	24	27	30
<p>One third is equivalent to...</p> <p>Two sixths <math>\frac{2}{6}</math></p> <p>Three ninths <math>\frac{3}{9}</math></p> <p>Four twelfths <math>\frac{4}{12}</math></p> <p>Five fifteenths <math>\frac{5}{15}</math></p> <p>Six eighteenths <math>\frac{6}{18}</math></p>										

# Multiplication square

Explore the square by only having any two rows visible.

Extend the multiplication square beyond 10 x 10 and look at the patterns.

	3	6	9	12	15	18	21	24	27	30
	4	8	12	16	20	24	28	32	36	40
<p>Try covering up other rows, what equivalent fractions can you find?</p>										

# Multiplication square

Explore the square by only having any two rows visible.

The multiplication square can also be used for ratio and proportion.

1	3	<p>Language of ratio</p> <p>For every one red counter there will be 3 yellow ones</p> <p>For every two red counters there will be 6 yellow ones</p> <p>For every three red counters there will be 9 yellow ones</p> <p>For every four red counters there will be 12 yellow ones</p> <p>For every five red counters there will be 15 yellow ones</p> <p>Try covering different columns...</p>
2	6	
3	9	
4	12	
5	15	
6	18	
7	21	
8	24	
9	27	
10	30	