



# MATHEMATICS



**N.S. Yr. 2 P.47**

**Understand multiplication**

## Equipment

Paper, pencil, ruler number line  
Counters, coins, buttons etc

# MathSphere

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## Concepts

Quite a lot of new language is introduced with multiplication; including times, multiply, lots of, and the multiplication sign ( $\times$ ). These words need to be repeated many times for children to become familiar with them.

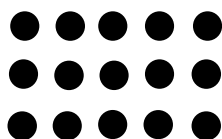
Multiplication should be introduced as repeated addition.

For example  $6 + 6 + 6$  means 3 lots of 6 or  $3 \times 6$ .

The multiplication sign ( $\times$ ) can be understood or interpreted as 'lots of' so  $3 \times 4$  means 3 lots of 4.

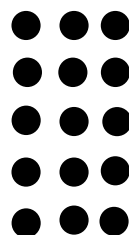
Examples of this can be shown using an array - a series of shapes in the form of a rectangle of rows and columns. So:

$3 \times 5$  can be shown as



3 lots of 5

or



or

5 lots of 3

Once multiplication has been understood and the sign seen as 'lots of', then the two times table can be introduced, with rapid response to questions such as 6 times 2 or 4 multiplied by 2, or 3 lots of 2.

Over time, the two times table will be learnt.



I'm doing  
 $4 + 4 + 4$

### Multiplication

I'm doing  
3 times 4



I'm doing  
3 lots of 4



**All the ratties are doing the same question.**

**$4 + 4 + 4$  is the same as 3 lots of 4 or 3 times 4**

**3 times 4 can be written like this;  $3 \times 4$**

**Fill in the missing numbers in these sums:**

1.  $4 + 4 + 4 = 3 \times 4 =$

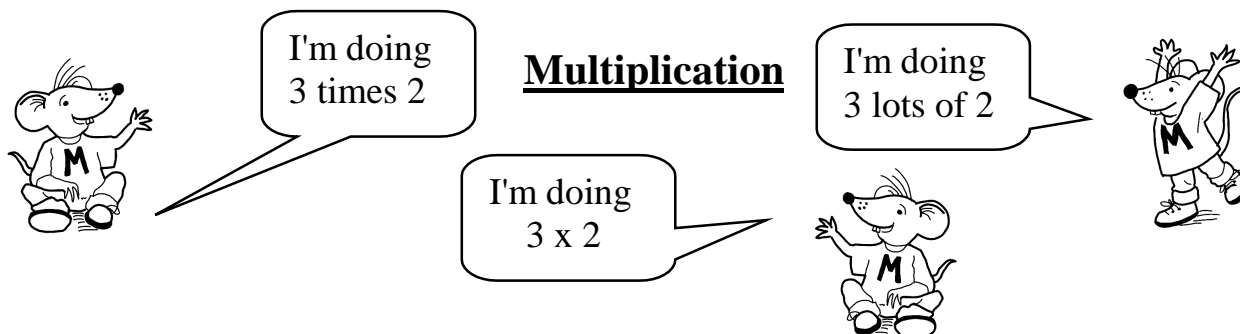
2.  $5 + 5 + 5 =$    $\times 5 =$

3.  $2 + 2 + 2 + 2 =$    $\times 2 =$

4.  $3 + 3 + 3 =$    $\times 3 =$

5.  $2 + 2 + 2 + 2 + 2 =$    $\times 2 =$

6.  $10 + 10 + 10 =$    $\times 10 =$



**All the ratties are doing the same question.**

**2 + 2 + 2 is the same as 3 lots of 2 or 3 x 2**

**3 x 2 means 3 times 2**

**Fill in the missing numbers in these sums:**

1. **2 + 2 + 2 = 3 x 2 =**

2. **6 + 6 + 6 =**  **x 6 =**

3. **3 + 3 + 3 + 3 =**  **x 3 =**

4. **4 + 4 + 4 =**  **x 4 =**

5. **5 + 5 + 5 + 5 + 5 =**  **x 5 =**

6. **1 + 1 + 1 + 1 =**  **x 1 =**

## Multiplication



Waiter, waiter!  
Will the pancakes be long?  
*No sir, they'll be round!*

**Try putting in the missing numbers:**

1. 3 lots of 4 =  x  =

2. 2 lots of 3 =  x  =

3. 4 lots of 2 =  x  =

4. 5 lots of 3 =  x  =

5. 3 lots of 3 =  x  =

6. 2 lots of 4 =  x  =

7. 5 lots of 4 =  x  =

## Multiplication



What animal needs oiling?  
*Mice, because they squeak!*

**Try putting in the missing numbers:**

1. 3 lots of 2 =  x  =

2. 2 lots of 5 =  x  =

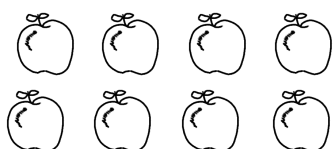
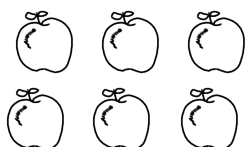
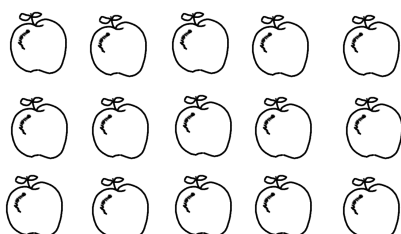
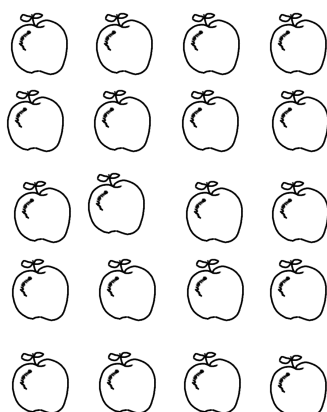
3. 4 lots of 3 =  x  =

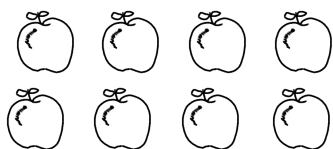
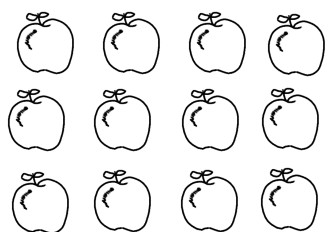
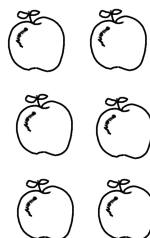
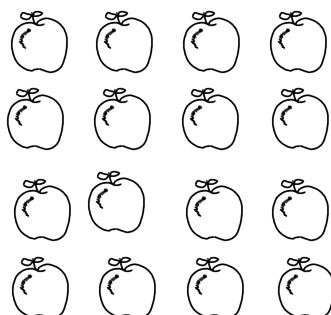
4. 5 lots of 2 =  x  =

5. 4 lots of 2 =  x  =

6. 3 lots of 5 =  x  =

7. 5 lots of 5 =  x  =

**Lots of.....**2 lots of 4 or  $2 \times 4 = 8$ 4 lots of 2 or  $4 \times 2 = 8$ 
 lots of  or  x  = 
 lots of  or  x  = 

 lots of  or  x  = 
 lots of  or  x  = 

 lots of  or  x  = 
 lots of  or  x  =

**Lots of.....**2 lots of 4 or  $2 \times 4 = 8$ 4 lots of 2 or  $4 \times 2 = 8$  lots of  or  x  =  lots of  or  x  =  lots of  or  x  =  lots of  or  x  =  lots of  or  x  =





Did you know that doubling is the opposite of halving.

### Halving and doubling



Yep! And halving is the opposite of doubling!

**Try these:**

1. If  $4 \times 2 = 8$ , what is half of 8 ?

2. If  $11 \times 2 = 22$ , what is half of 22 ?

3. If  $2 \times 7 = 14$ , what is half of 14 ?

4. If half of 14 is 7, what is double 7 ?

5. If half of 10 is 5, what is double 5 ?

6. If half of 16 is 8, what is double 8 ?



### Halving and doubling



My teacher keeps on going on about knowing your doubles!

And mine goes on about knowing your halves!

**Try these:**

1. If  $2 \times 8 = 16$ , what is half of 16 ?

2. If  $10 \times 2 = 20$ , what is half of 20 ?

3. If  $2 \times 6 = 12$ , what is half of 12 ?

4. If half of 8 is 4, what is double 4 ?

5. If half of 18 is 9, what is double 9 ?

6. If half of 12 is 6, what is double 6 ?

**Two times table**

$1 \times 2 = 2$	One times two equals two
$2 \times 2 = 4$	Two times two equals four
$3 \times 2 = 6$	Three times two equals six
$4 \times 2 = 8$	Four times two equals eight
$5 \times 2 = 10$	Five times two equals ten
$6 \times 2 = 12$	Six times two equals twelve
$7 \times 2 = 14$	Seven times two equals fourteen
$8 \times 2 = 16$	Eight times two equals sixteen
$9 \times 2 = 18$	Nine times two equals eighteen
$10 \times 2 = 20$	Ten times two equals twenty

**Try and answer these really quickly. Use the table to help you.**

1. Two times three

2.  $2 \times 5 =$

3. Two times six

4.  $2 \times 10 =$

5. Double 4

6.  $3 \times 2 =$

7. Double 8

8.  $1 \times 2 =$

9. 7 multiplied by 2

10.  $4 \times 2 =$

**Two times table**

This is the really quick way of saying them!



$1 \times 2 = 2$	One times two equals two	One 2 is 2
$2 \times 2 = 4$	Two times two equals four	Two 2s are 4
$3 \times 2 = 6$	Three times two equals six	Three 2s are 6
$4 \times 2 = 8$	Four times two equals eight	Four 2s are 8
$5 \times 2 = 10$	Five times two equals ten	Five 2s are 10
$6 \times 2 = 12$	Six times two equals twelve	Six 2s are 12
$7 \times 2 = 14$	Seven times two equals fourteen	Seven 2s are 14
$8 \times 2 = 16$	Eight times two equals sixteen	Eight 2s are 16
$9 \times 2 = 18$	Nine times two equals eighteen	Nine 2s are 18
$10 \times 2 = 20$	Ten times two equals twenty	Ten 2s are 20

**Try and answer these really quickly. Use the table to help you.**

1. Two times two

2.  $2 \times 6 =$ 


3. Two times eight

4.  $2 \times 2 =$ 


5. Double three

6.  $9 \times 2 =$ 


7. Double 7

8.  $5 \times 2 =$ 


9. 5 multiplied by 2

10.  $2 \times 7 =$

**Speed tables**

See how quickly you can do these....but they must all be correct!  
And I can see what you are doing from up here!

1.  $5 \times 2 = \bigcirc$

2.  $2 \times 7 = \bigcirc$

3.  $4 \times \bigcirc = 8$

4.  $7 \times \bigcirc = 14$

5.  $\bigcirc \times 2 = 20$

6.  $\bigcirc \times 2 = 12$

7.  $3 \times 2 = \bigcirc$

8.  $2 \times 9 = \bigcirc$

9.  $6 \times \bigcirc = 12$

10.  $1 \times \bigcirc = 2$

11.  $\bigcirc \times 2 = 4$

12.  $\bigcirc \times 2 = 16$

13.  $9 \times 2 = \bigcirc$

14.  $2 \times 3 = \bigcirc$

Speed tables

I bet you're as good at these sums as I am on these stilts – although I must say, I am pretty good!

1.  $6 \times 2 = \bigcirc$

2.  $2 \times 8 = \bigcirc$

3.  $4 \times \bigcirc = 8$

4.  $7 \times \bigcirc = 14$

5.  $\bigcirc \times 2 = 2$

6.  $\bigcirc \times 2 = 14$

7.  $4 \times 2 = \bigcirc$

8.  $2 \times 10 = \bigcirc$

9.  $7 \times \bigcirc = 14$

10.  $2 \times \bigcirc = 4$

11.  $\bigcirc \times 2 = 6$

12.  $\bigcirc \times 2 = 18$

13.  $5 \times 2 = \bigcirc$

14.  $2 \times 4 = \bigcirc$

**Two times table questions**

1. How many hands do three children have?



2. How many legs on five monkeys?



3. How many eyes on four dogs?



4. How many shoes in six pairs?



5. How many gloves in ten pairs?



6. Sam's pencil is 4 cm long.  
Ben's is twice as long.  
How long is Ben's?



7. Anna threw a ball 6 metres.  
Claire threw it twice as far.  
How far did Claire throw the ball?



8. Dan had £3.  
Karl had twice as much.  
How much did Karl have?



9. How many ears do eight teddies have?



10. How many socks do ten football players have?

**Two times table questions**

1. How many hands do four children have?



2. How many legs on six monkeys?



3. How many eyes on five dogs?



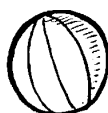
4. How many shoes in seven pairs?



5. How many gloves in two pairs?



6. Ali's pencil is 5 cm long.  
Leo's is twice as long.  
How long is Leo's?



7. Fran threw a ball 9 metres.  
Jo threw it twice as far.  
How far did Jo throw the ball?



8. Sam had £7.  
Gita had twice as much.  
How much did Gita have?



9. How many ears do 10 teddies have?



10. How many socks do eleven football players have?



Answers**Page 3**

1. 12      2. 3, 15      3. 4, 8      4. 3, 9      5. 5, 10      6. 3, 30

**Page 4**

1. 6      2. 3, 18      3. 4, 12      4. 3, 12      5. 5, 25      6. 4, 4

**Page 5**1.  $3 \times 4 = 12$       2.  $2 \times 3 = 6$       3.  $4 \times 2 = 8$       4.  $5 \times 3 = 15$   
5.  $3 \times 3 = 9$       6.  $2 \times 4 = 8$       7.  $5 \times 4 = 20$ **Page 6**1.  $3 \times 2 = 6$       2.  $2 \times 5 = 10$       3.  $4 \times 3 = 12$       4.  $5 \times 2 = 10$   
5.  $4 \times 2 = 8$       6.  $3 \times 5 = 15$       7.  $5 \times 5 = 25$ **Page 7**2 lots of 3   or    $2 \times 3 = 6$       3 lots of 5   or    $3 \times 5 = 15$       5 lots of 4   or    $5 \times 4 = 20$   
3 lots of 2   or    $3 \times 2 = 6$       5 lots of 3   or    $5 \times 3 = 15$       4 lots of 5   or    $4 \times 5 = 20$ **Page 8**3 lots of 4 or  $3 \times 4 = 12$       3 lots of 2   or    $3 \times 2 = 6$       4 lots of 4   or    $4 \times 4 = 16$   
4 lots of 3 or  $4 \times 3 = 12$       2 lots of 3   or    $2 \times 3 = 6$ **Page 9**

1. 4      2. 11      3. 7      4. 14      5. 10      6. 16

**Page 10**

1. 8      2. 10      3. 6      4. 8      5. 18      6. 12

**Page 11**

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

**Page 12**

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

**Page 13**1. 10      2. 14      3. 2      4. 2      5. 10      6. 6      7. 6  
8. 18      9. 2      10. 2      11. 2      12. 8      13. 18      14. 6**Page 14**1. 12      2. 16      3. 2      4. 2      5. 1      6. 7      7. 8  
8. 20      9. 2      10. 2      11. 3      12. 9      13. 10      14. 8**Page 15**

1. 6      2. 10      3. 8      4. 12      5. 20      6. 8 cm      7. 12 m      8. £6      9. 16      10. 20

**Page 16**

1. 8      2. 12      3. 10      4. 14      5. 4      6. 10 cm      7. 18 m      8. £14      9. 20      10. 22