Mathletics

Series D Student

Multiplication and Division

My name

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Series Author:

Nicola Herringer

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Introducing multiplication – groups of 5

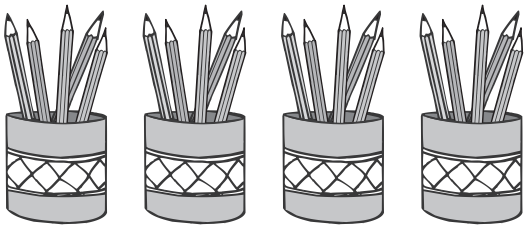
Use repeated addition to find the total number of fingers.

5 + 5 + 5 = 15

3 groups of 5 is equal to 15.

1 **Find the total of each group by using repeated addition.**

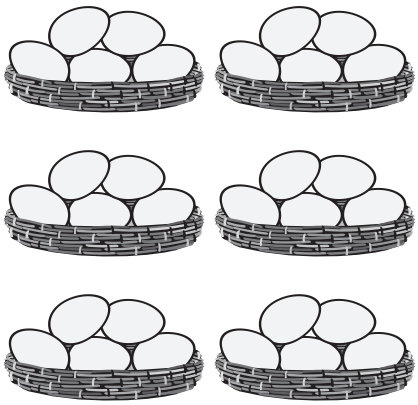
a How many pencils?



☐ + ☐ + ☐ + ☐ = ☐

☐ groups of ☐ is equal to ☐

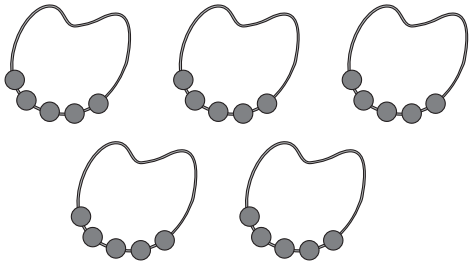
b How many eggs?



☐ + ☐ + ☐ + ☐ + ☐ + ☐ = ☐

☐ groups of ☐ is equal to ☐

c How many beads?



☐ + ☐ + ☐ + ☐ + ☐ = ☐

☐ groups of ☐ is equal to ☐

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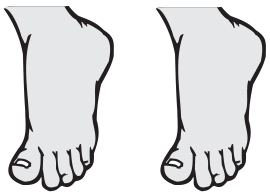
Introducing multiplication – groups of 5

This is a multiplication symbol × and it means 'groups of'.

So instead of repeated addition, we can use a multiplication symbol.

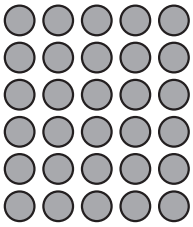
$5 + 5 + 5 + 5 + 5 = 25$ $\qquad$ $5 \times 5 = 25$

2 **Find the total of each group by using repeated addition:**

a 

☐ groups of ☐ is equal to ☐

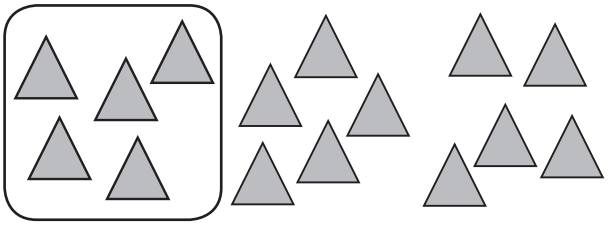
☐ × ☐ = ☐

b 

☐ rows of ☐ is equal to ☐

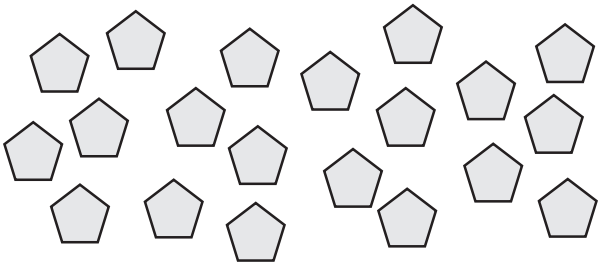
☐ × ☐ = ☐

3 **Ring the shapes in groups of 5. One group is ringed for you. Then complete the multiplication fact.**

a 

☐ groups of ☐ is equal to ☐

☐ × 5 = ☐

b 

☐ groups of ☐ is equal to ☐

☐ × 5 = ☐

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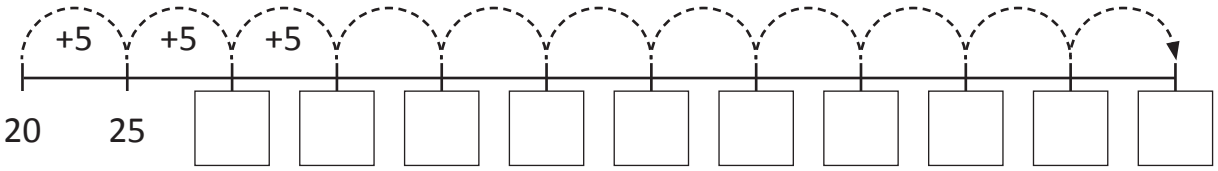
Introducing multiplication – 5 times table

Here is a skip counting pattern on a hundred grid. It shows a counting pattern of 5.

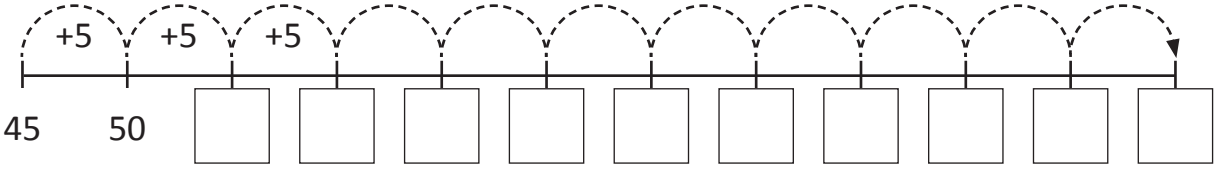
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

1 **Finish each pattern by counting in 5s:**

a

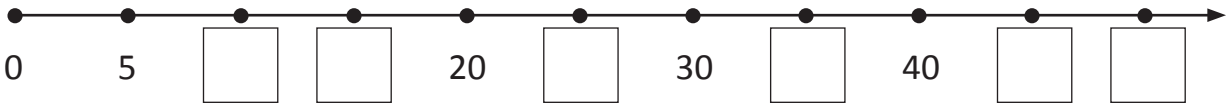


b



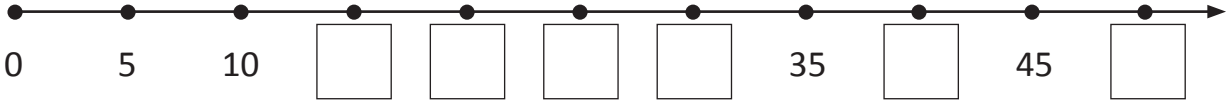
2 **Show × 5 multiplication facts on each number line.**

a Finish labelling this number line and then show 5 jumps starting from 0:



This is the same as ☐ × 5 = ☐

b Finish labelling this number line and then show 7 jumps starting from 0:



This is the same as ☐ × 5 = ☐

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Introducing multiplication – 5 times table

3 **Write a 5 times table fact for each set of 5 cent coins. The first one has been done for you.**

a

4 × 5¢ = 20¢

b

□ × □ = □

c

□ × □ = □

4 **Times tables are a set of multiplication facts from 1 to 10 based on multiplying by the same number each time. Write the answers for the 5 times table.**

1 × 5 = □

2 × 5 = □

3 × 5 = □

4 × 5 = □

5 × 5 = □

6 × 5 = □

7 × 5 = □

8 × 5 = □

9 × 5 = □

10 × 5 = □

5 **Now answer the mixed up 5 times table.**

a 2 × 5 = □

b 8 × 5 = □

c 9 × 5 = □

d 10 × 5 = □

e 3 × 5 = □

f 6 × 5 = □

g 7 × 5 = □

h 5 × 5 = □

i 1 × 5 = □

j 4 × 5 = □

6 **Write the missing number in each 5 times table fact.**

a □ × 5 = 35

b □ × 5 = 20

c □ × 5 = 50

d □ × 5 = 15

e □ × 5 = 40

f □ × 5 = 10

g □ × 5 = 30

h □ × 5 = 45

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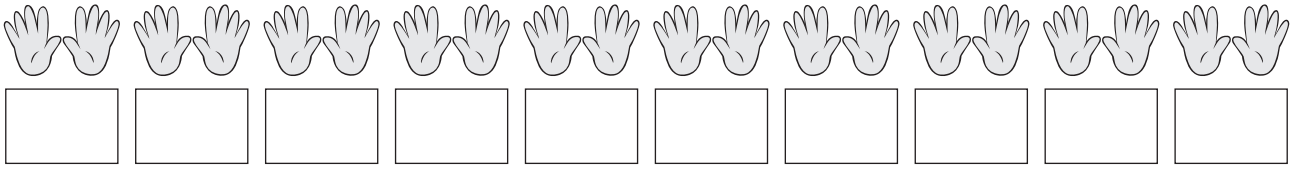
Introducing multiplication – 10 times table

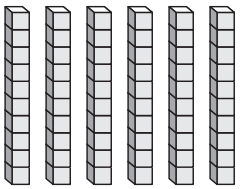
If you can skip count in 10s, you know your 10 times table.

1 **Complete this sequence by counting in 10s:**



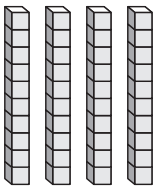
2 **Count the longs and then complete the multiplication fact:**

a



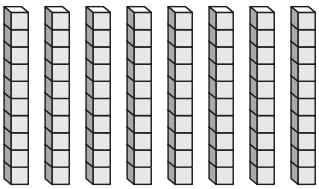
□ × 10 = □

b



□ × 10 = □

c



□ × 10 = □

3 **Complete the 10 times table:**

1 × 10 = □

2 × 10 = □

3 × 10 = □

4 × 10 = □

5 × 10 = □

6 × 10 = □

7 × 10 = □

8 × 10 = □

9 × 10 = □

10 × 10 = □

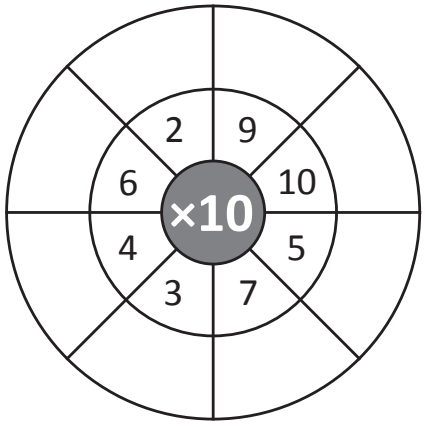
4 **Write the missing number in each 10 times table fact:**

a □ × 10 = 50

b □ × 10 = 80

c □ × 10 = 70

5 **Complete this × 10 wheel:**



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Introducing multiplication – multiplying any number by 10

When we multiply any number by 10, a zero goes in the units column and the digits all move one space along to the left.

Hundreds	Tens	Units
		2
	2	0

2 × 10 = 20

1 **Show how the digits all move along when they are multiplied by 10 and write the answers below:**

a

Hundreds	Tens	Units
		7
	7	0

7 × 10 = ☐

b

Hundreds	Tens	Units
		3

3 × 10 = ☐

c

Hundreds	Tens	Units
	1	5

15 × 10 = ☐

d

Hundreds	Tens	Units
	2	2

22 × 10 = ☐

2 **Connect these × 10 facts to the answers:**

16 × 10	62 × 10	93 × 10	99 × 10	13 × 10

220	510	930	990	850	160	130	620	720	980

72 × 10	51 × 10	85 × 10	22 × 10	98 × 10

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Introducing multiplication – multiplying numbers by 0 and 1

Any number multiplied by 1 always equals the same number.

Any number multiplied by 0 always equals zero.

1 **Practise multiplying by 1:**

a

8 groups of 1 are equal to ☐

☐ × 1 = ☐

b

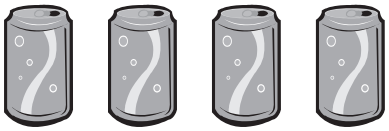
6 groups of 1 are equal to ☐

☐ × 1 = ☐

c

5 groups of 1 are equal to ☐

☐ × 1 = ☐

d 

4 groups of 1 are equal to ☐

☐ × 1 = ☐

2 **Practise multiplying by 1 and 0:**

a 12 × 0 = ☐ **b** 6 × 1 = ☐ **c** 3 × 0 = ☐

d 2 × 1 = ☐ **e** 8 × 0 = ☐ **f** 20 × 1 = ☐

3 **Complete this grid:**

×	9	10	6	1	5	4	7	3	8	2
0										
1										

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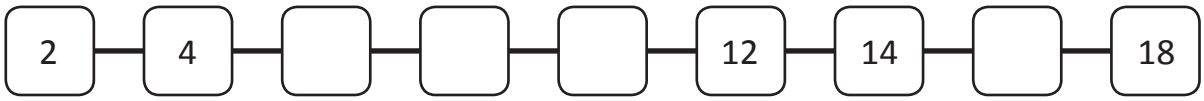
Multiplication facts – 2 times table

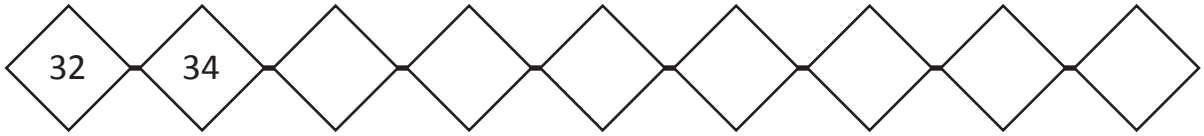
Counting in 2s, will help you know many times table facts.

1 **Complete each pattern by counting in 2s:**

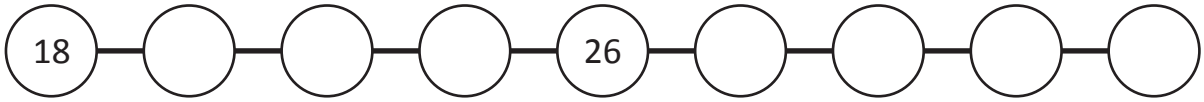
a



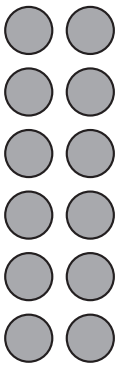
b



c

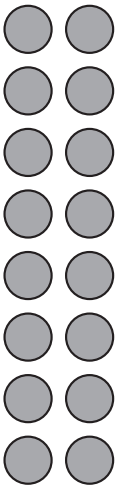


2 **Show how many dots there are in each array by counting in 2s. Then write the times table fact below:**



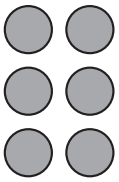
a 6 twos

□ × 2 = □



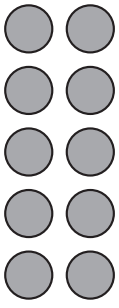
b 8 twos

□ × 2 = □



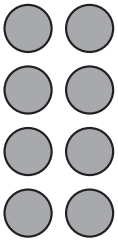
c 3 twos

□ × 2 = □



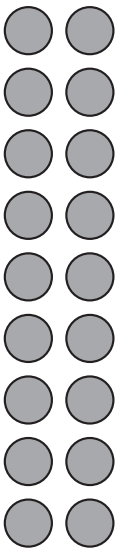
d 5 twos

□ × 2 = □



e 4 twos

□ × 2 = □



f 9 twos

□ × 2 = □

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Multiplication facts – 2 times table

3 **How many straws are in:**

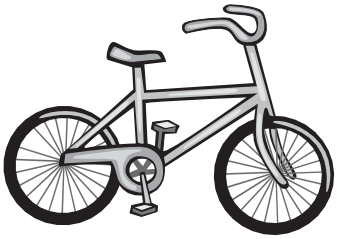
a 3 drinks? ☐ × 2 = ☐

b 10 drinks? ☐ × 2 = ☐

c 5 drinks? ☐ × 2 = ☐

d 2 drinks? ☐ × 2 = ☐

4 **How many wheels have:**



a 4 bikes? ☐ × 2 = ☐

b 9 bikes? ☐ × 2 = ☐

c 7 bikes? ☐ × 2 = ☐

d 3 bikes? ☐ × 2 = ☐

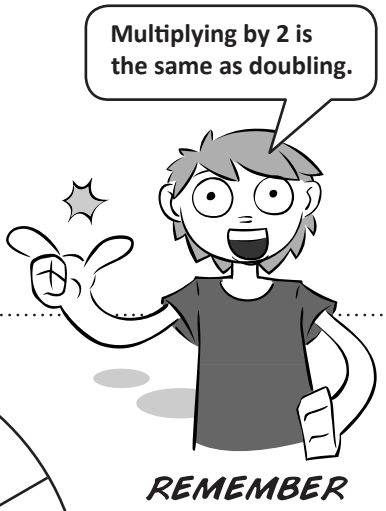
5 **Double each number:**

a 6 × 2 = ☐

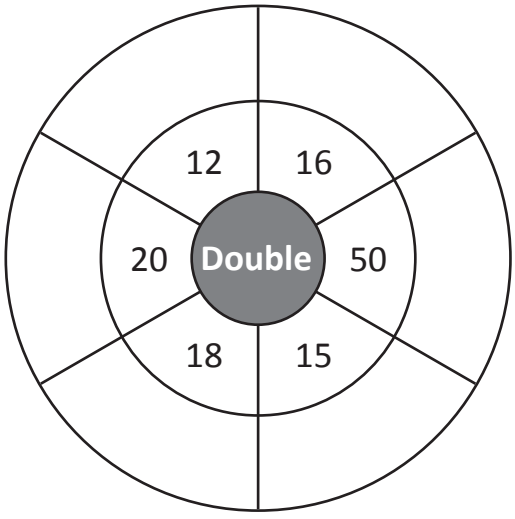
b 9 × 2 = ☐

c 8 × 2 = ☐

d 7 × 2 = ☐



6 **Complete this doubling wheel. These facts are not in the 2 times table, but they are facts that are useful to know.**



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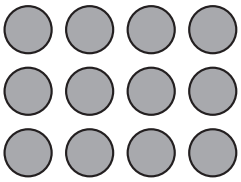
Multiplication facts – 4 times table

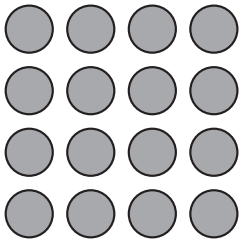
Practise your 4 times table.

1 **Write the multiplication fact for each array:**



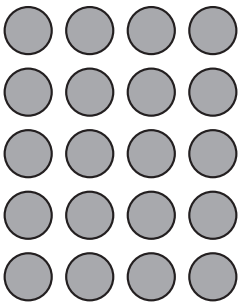
a 3 fours

□ × 4 = □



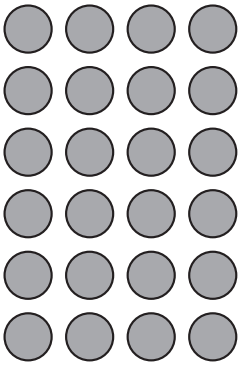
b 4 fours

□ × 4 = □



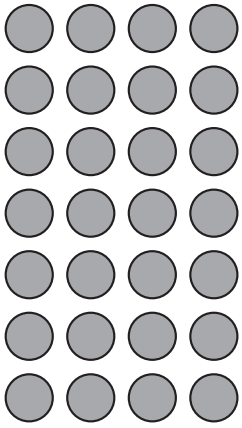
c 5 fours

□ × 4 = □



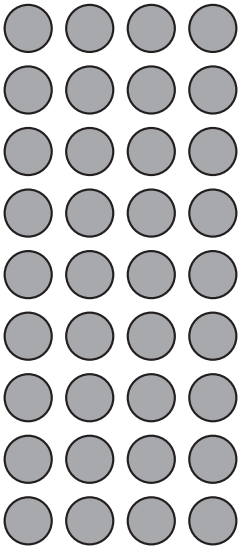
d 6 fours

□ × 4 = □



e 7 fours

□ × 4 = □



f 9 fours

□ × 4 = □

2 **How many cupcakes are there on:**

a 4 plates?

□ × 4 = □

b 3 plates?

□ × 4 = □

c 7 plates?

□ × 4 = □

d 9 plates?

□ × 4 = □

e 2 plates?

□ × 4 = □

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Multiplication facts – 4 times table

3 **Here is a half of a hundred 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

a Circle the counting pattern of 2s. Cross the counting pattern of 4s.

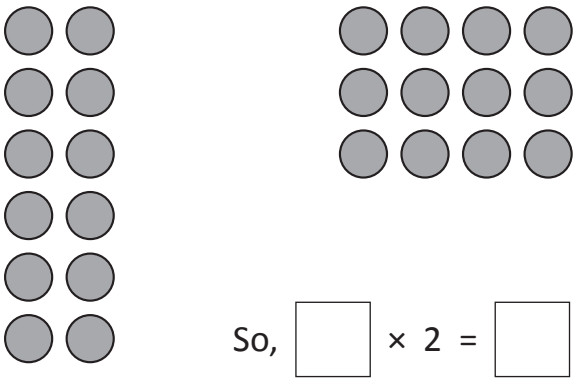
b What do you notice?

_____

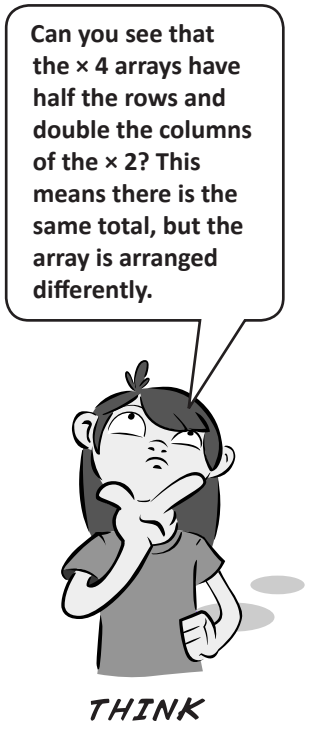
_____

4 **Complete the matching × 2 and × 4 facts:**

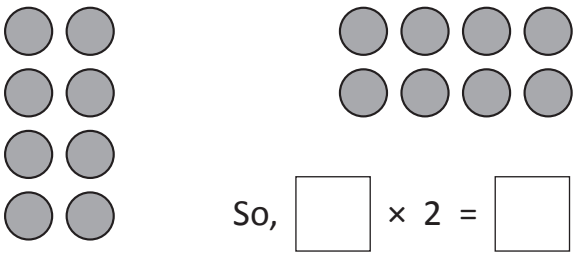
a 6 × 2 = 12 and 3 × 4 = 12



So, ☐ × 2 = ☐ × 4



b ☐ × 2 = ☐ and ☐ × 4 = ☐



So, ☐ × 2 = ☐ × 4

c 8 × 2 = ☐ × 4

d 10 × 2 = ☐ × 4

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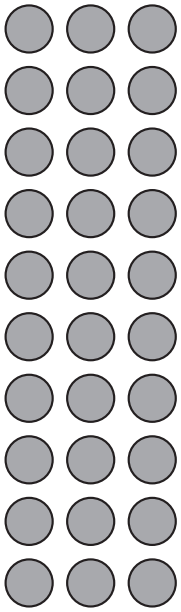
Multiplication facts – 3 times table

Practise your 3 times table.

1 **Use this array to complete the 3 times table:**



1 × 3 = ☐

2 × 3 = ☐

3 × 3 = ☐

4 × 3 = ☐

5 × 3 = ☐

6 × 3 = ☐

7 × 3 = ☐

8 × 3 = ☐

9 × 3 = ☐

10 × 3 = ☐

2 **Now try them mixed up:**

a 3 × 3 = ☐ **b** 8 × 3 = ☐

c 7 × 3 = ☐ **d** 10 × 3 = ☐

e 2 × 3 = ☐ **f** 4 × 3 = ☐

g 5 × 3 = ☐ **h** 6 × 3 = ☐

i 9 × 3 = ☐ **j** 1 × 3 = ☐

3 **Alfred is an alien from the Planet Trampolon. The surface of Planet Trampolon is like walking on a trampoline. That's why Alfred and all his race of aliens need 3 legs for extra balance. They also have 3 fingers on each hand and 3 eyes.**

a How many legs for:

6 aliens?

6 × ☐ = ☐

4 aliens?

4 × ☐ = ☐

b How many eyes for:

3 aliens?

☐ × ☐ = ☐

10 aliens?

☐ × ☐ = ☐

c How many fingers on one hand for:

9 aliens?

☐ × ☐ = ☐

5 aliens?

☐ × ☐ = ☐

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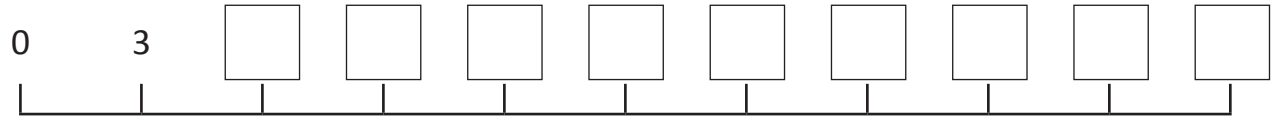
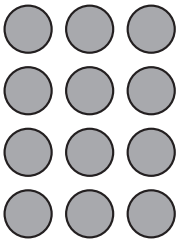
Multiplication facts – 3 times table

4 **Label the number line so it goes up in 3s:**

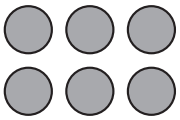


5 **Write two turnaround facts for each array. The first one has been done for you.**



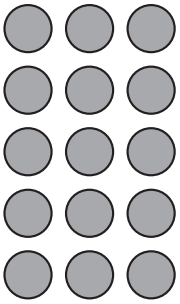
a $4 \times 3 = 12$

$3 \times 4 = 12$



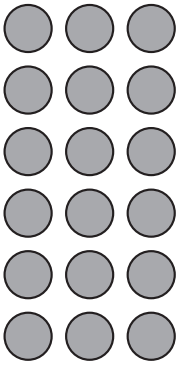
b $\square \times \square = \square$

$\square \times \square = \square$



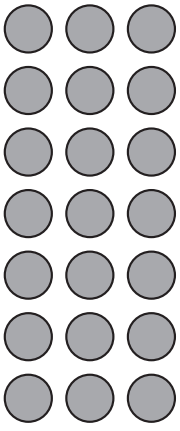
c $\square \times \square = \square$

$\square \times \square = \square$



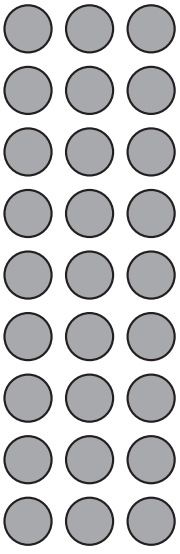
d $\square \times \square = \square$

$\square \times \square = \square$



e $\square \times \square = \square$

$\square \times \square = \square$



f $\square \times \square = \square$

$\square \times \square = \square$

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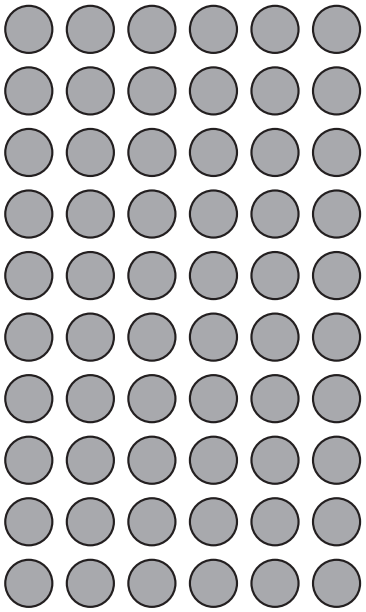
Multiplication facts – 6 times table

Practise your 6 times table. Did you know that we can use × 6 for short?
So × 6 just means 6 times table, just as × 3 means 3 times table.

1 **Use this array to complete the 6 times table:**



1 × 6 = ☐
2 × 6 = ☐
3 × 6 = ☐
4 × 6 = ☐
5 × 6 = ☐
6 × 6 = ☐
7 × 6 = ☐
8 × 6 = ☐
9 × 6 = ☐
10 × 6 = ☐

2 **Fill in the missing numbers:**

a ☐ × 6 = 54
b ☐ × 6 = 36
c ☐ × 6 = 18
d ☐ × 6 = 24
e ☐ × 6 = 60
f ☐ × 6 = 12
g ☐ × 6 = 48

3 **Complete this table by recalling the 3 times table. Then complete the 6 times table. Can you see how the 3 times table helps with the 6?**

	3	8	2	5	9	10	6
× 3							
× 6							

4 **Solve these problems.**

a I saved $7 every week over 6 weeks. How much did I save in total?
☐ × ☐ = ☐

b 8 pencil cases had 3 blue pens in each. How many blue pens are there in total?
☐ × ☐ = ☐

c 9 classes each baked 6 cakes for the school fundraiser. How many cakes were baked in total?
☐ × ☐ = ☐

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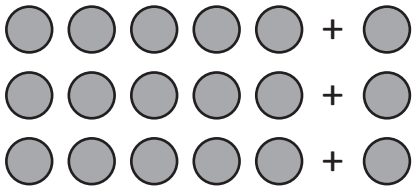
Multiplication facts – 6 times table



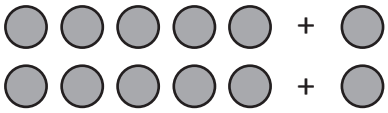
You know more times tables facts than you realise. For example, knowing your × 5 can help with your × 6.

The array shows 3 rows of 5. If we add another dot to each row we can change 3 rows of 5 to 3 rows of 6. This is called building up.

$3 \times 5 = 15 + 3 \longrightarrow 3 \times 6 = 18$

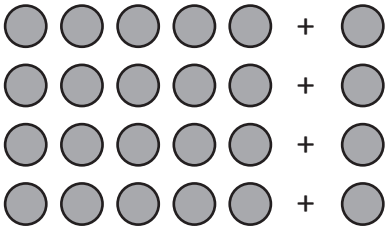
5 **Change these × 5 arrays into × 6 arrays.**

a



$2 \times 5 =$ ☐ + ☐ ⟶ $2 \times 6 =$ ☐

b



$4 \times 5 =$ ☐ + ☐ ⟶ $4 \times 6 =$ ☐

6 **Complete this table to show how to change a × 5 array to a × 6 array by building up. The first one has been done for you.**

	× 5	Build up by	× 6
a	3 × 5 = 15	*3*	*3 × 6 = 18*
b	2 × 5 = 10		
c	7 × 5 = 35		
d	4 × 5 = 20		
e	6 × 5 = 30		
f	9 × 5 = 45		

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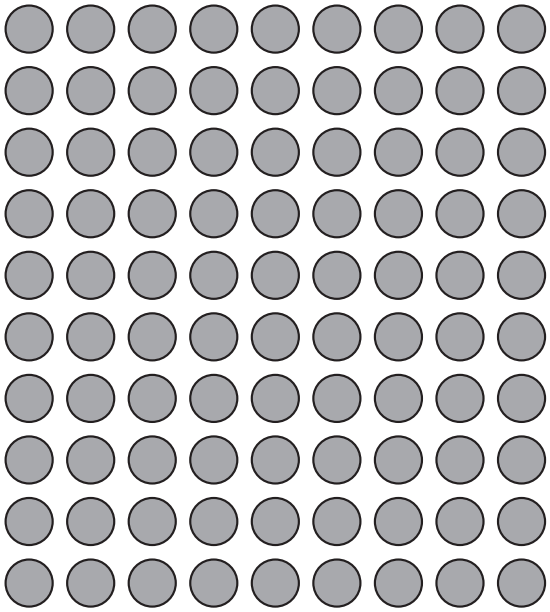
Multiplication facts – 9 times table

Practise your 9 times table.

1 **Use this array to complete the 9 times table:**



1 × 9 = ☐

2 × 9 = ☐

3 × 9 = ☐

4 × 9 = ☐

5 × 9 = ☐

6 × 9 = ☐

7 × 9 = ☐

8 × 9 = ☐

9 × 9 = ☐

10 × 9 = ☐

2 **Complete these × 9 facts. Look out for turnarounds.**

a 3 × 9 = ☐ **b** 9 × 4 = ☐ **c** 6 × 9 = ☐

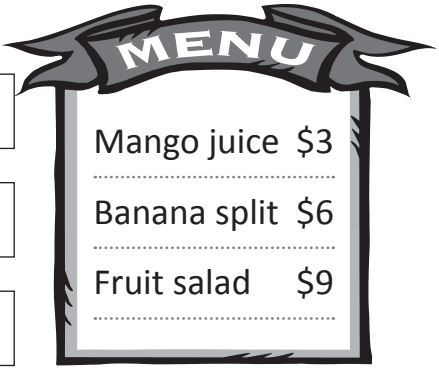
d 2 × 9 = ☐ **e** 9 × 5 = ☐ **f** 1 × 9 = ☐

3 **Find the cost of these items:**

a 6 fruit salads = ☐ **b** 4 banana splits = ☐

c 3 mango juices = ☐ **d** 5 fruit salads = ☐

e 3 banana splits = ☐ **f** 7 mango juices = ☐



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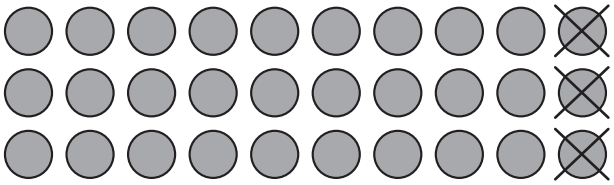
Multiplication facts – 9 times table

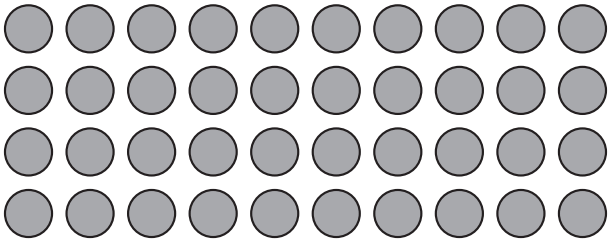


$3 \times 9 =$?

If you get stuck on a × 9, remember the × 10 fact and build down.

$3 \times 10 = 30 - 3 \longrightarrow 3 \times 9 = 27$

4 **Change this × 10 array into a × 9 array:**



$4 \times 10 =$ ☐ $- 4 \longrightarrow 4 \times 9 =$ ☐

5 **Complete this table to show how to change a × 10 array to a × 9 array by taking 1 from each row.**

× 10	Build down by	× 9
3 × 10 = 30	*3*	*3 × 9 = 27*
5 × 10 = 50		
9 × 10 = 90		
6 × 10 = 60		
4 × 10 = 40		
2 × 10 = 20		
8 × 10 = 80		
7 × 10 = 70		

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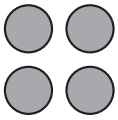
Multiplication facts – square numbers

A square number is a number multiplied by itself.

These arrays show the first 3 square numbers.

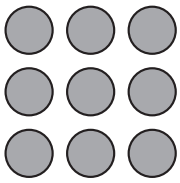
1 × 1 = 1

1 squared = 1



2 × 2 = 4

2 squared = 4

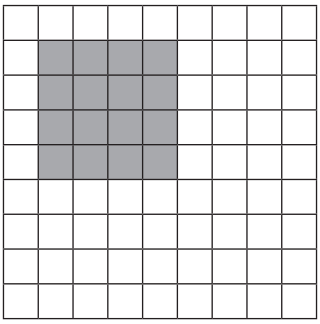


3 × 3 = 9

3 squared = 9

1 **Here is another way to show square numbers. Look at the array shown on each grid and write the square number multiplication:**

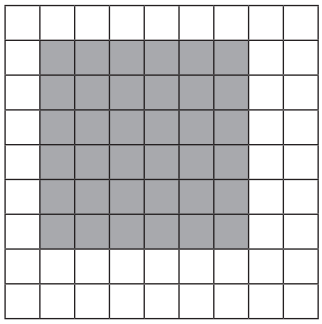
a



□ × □ = □

4 squared = □

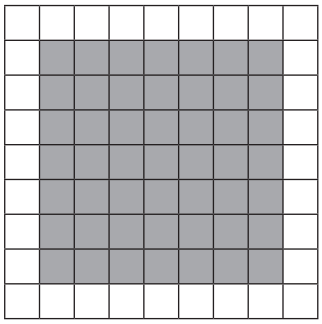
b



□ × □ = □

6 squared = □

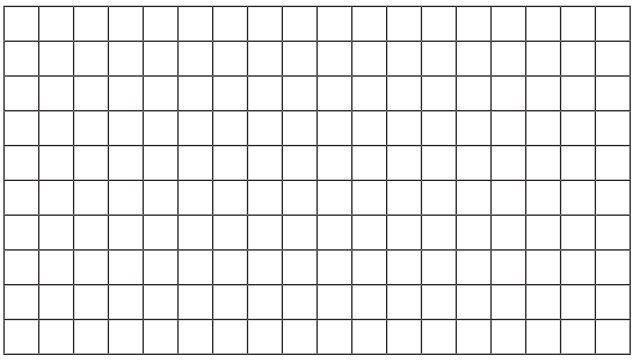
c



□ × □ = □

7 squared = □

2 **On this grid, shade the largest square number you can:**



□ × □ = □

□ squared = □

3 **Answer these:**

a 81 = □ squared

b 25 = □ squared

c 64 = □ squared

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Multiplication facts – multiples

When two numbers are multiplied together, the answer is called a multiple.

For example, the first 3 multiples of 5 are 5, 10, 15.

$1 \times 5 = (5)$ $2 \times 5 = (10)$ $3 \times 5 = (15)$

1 **Complete the list of multiples for each number in the circle:**

a	**6**	6	12							
b	**4**	4	8							
c	**8**	8	16							
d	**3**	3	6							

2 **In each group of multiples, cross out the number that does not belong. You will need to look carefully, because they are not in order.**

a	Multiples of 5	10	20	35	40	12
b	Multiples of 6	12	6	29	24	18
c	Multiples of 8	25	16	32	40	8

3 **Use the clues to work out the multiples:**

a This number is a multiple of both 9 and 3 and is less than 20 but greater than 10. ☐

b This number is a multiple of 5. It is greater than 15 but less than 25. ☐

c This number is a multiple of both 4 and 8 and is the next squared number after 9. ☐

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Mental multiplication strategies – doubling strategy

There are many double facts that you should know.

This includes numbers outside the times tables that we have been working on.

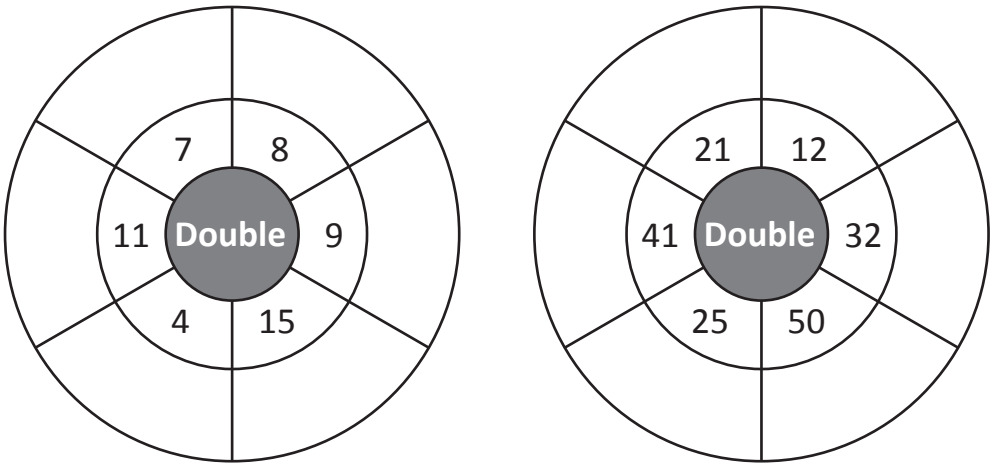
Here are 2 double facts that are handy to know:

double 20 is 40 double 15 is 30 Can you think of more?

1 **List all the double facts outside of the 2 times table that you know in the space below. Here are two to start you off:**

double 12 is 24 double 50 is 100

2 **Complete these doubling wheels:**



3 **Doubling 2 digit numbers is easy if you split the digits and double each part. Complete this doubling grid. The first one has been done for you.**

a Double 36 $= 30 \times 2 + 6 \times 2$ $= 60 + 12$ $= 72$	**b** Double 23
c Double 19	**d** Double 41

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Mental multiplication strategies – doubling strategy

4 **The double-double strategy is when you multiply by 4. Look at double-double 2: double 2 once is 4 and double 2 twice is 8.**
Practise using the double-double strategy with these tables. The first one is done for you.

a

7 × 4 = 28	
Double 7 once	14
Double 7 twice	28

b

15 × 4 =	
Double 15 once	
Double 15 twice	

c

21 × 4 =	
Double 21 once	
Double 21 twice	

d

12 × 4 =	
Double 12 once	
Double 12 twice	

e

11 × 4 =	
Double 11 once	
Double 11 twice	

f

14 × 4 =	
Double 14 once	
Double 14 twice	

5 **Play this game with a partner. You will need this page each and a die to share. The aim is to be the first to place a tick above all the numbers. Double or double-double the number rolled on the die, then tick the answer on the grid.**

For example, Player 1 rolls a 4. They can either double it in order to tick 8 OR double-double it to tick 16. You must apply one of the strategies to the number rolled. If you can't tick a box, you miss a turn!

2	4	6	8	10	12	16	20	24

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Mental multiplication strategies – split strategy

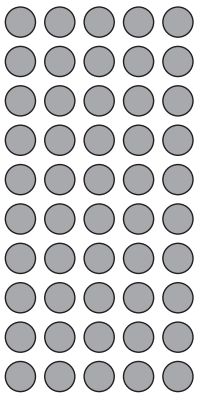
The split strategy is when we multiply numbers in 2 parts.

Let's use the split strategy for 12 × 5.

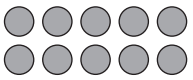
Split 12 into 10 and 2. Next multiply each part by 5, then add:

What is 12 × 5?

10 × 5 = 50



2 × 5 = 10



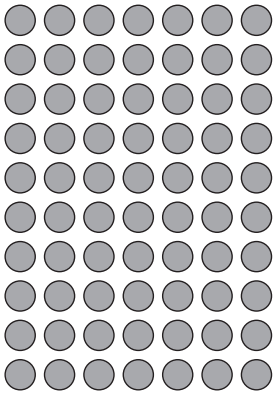
50 + 10 = 60

So, 12 × 5 = 60

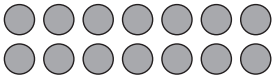
1 **Try the split strategy with these. Use the arrays if you get stuck.**

a What is 12 × 7?

10 × ☐ = ☐



2 × ☐ = ☐

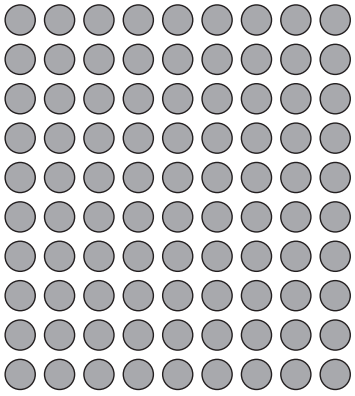


☐ + ☐ = ☐

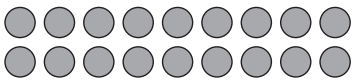
So, 12 × 7 = ☐

b What is 12 × 9 ?

10 × ☐ = ☐



2 × ☐ = ☐



☐ + ☐ = ☐

So, 12 × 9 = ☐

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Mental multiplication strategies – split strategy

2 **Practise the split strategy again, this time without an array to look at.**

a What is 12 × 3?

10 × ☐ = ☐ 2 × ☐ = ☐

☐ + ☐ = ☐

So, 12 × 3 = ☐

b What is 12 × 6 ?

10 × ☐ = ☐ 2 × ☐ = ☐

☐ + ☐ = ☐

So, 12 × 6 = ☐

c What is 12 × 8 ?

10 × ☐ = ☐ 2 × ☐ = ☐

☐ + ☐ = ☐

So, 12 × 8 = ☐

3 **Use the split strategy to multiply by 13.**

13 is _____ + _____

a 13 × 8 = ☐ **b** 13 × 9 = ☐

c 13 × 7 = ☐ **d** 13 × 5 = ☐

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Mental multiplication strategies – compensation strategy

Remember how we learned the × 9 by building down from the × 10?

$$3 \times 10 = 30 - 3 \longrightarrow 3 \times 9 = 27$$

This is the compensation strategy.

Look at 3 × 19. 19 is close to 20, so we can multiply by the next multiple of ten which is 20. Then we build down because we have an extra group of 3.

$$3 \times 19 \longrightarrow 3 \times 20 = 60 - 3$$

So, $3 \times 19 = 57$

1 **When you are multiplying by a multiple of ten, look for a fact you know then put a zero on the end. These patterns show you how to do this:**

a $3 \times 2 =$ ☐

$3 \times 20 =$ ☐

b $5 \times 3 =$ ☐

$5 \times 30 =$ ☐

c $7 \times 2 =$ ☐

$7 \times 20 =$ ☐

d $4 \times 4 =$ ☐

$4 \times 40 =$ ☐

2 **The steps for the compensation strategy are set out for you here. Practise multiplying by the next multiple of ten and then build down.**

a $5 \times 29 \longrightarrow 5 \times 30 =$ ☐ $- 5$

So, $5 \times 29 =$ ☐

b $3 \times 19 \longrightarrow 3 \times 20 =$ ☐ $- 3$

So, $3 \times 19 =$ ☐

c $2 \times 39 \longrightarrow 2 \times 40 =$ ☐ $- 2$

So, $2 \times 39 =$ ☐

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Mental multiplication strategies – compensation strategy

3 **Use the compensation strategy. This time you have to think of the next multiple of ten and what you have to build down by. The first one has been done for you.**

a 3 × 39 → 3 × [40] = [120] − [3]

So, 3 × 39 = [117]

b 4 × 29 → 4 × [ ] = [ ] − [ ]

So, 4 × 29 = [ ]

c 6 × 19 → 6 × [ ] = [ ] − [ ]

So, 6 × 19 = [ ]

d 5 × 59 → 5 × [ ] = [ ] − [ ]

So, 5 × 59 = [ ]

4 **Roll a die to make your own multiplication questions. Choose the compensation strategy for one column and the split strategy for the other.**

a [ ] × 29 = [ ]

b [ ] × 39 = [ ]

c [ ] × 19 = [ ]

Which strategy did you use and why?

a [ ] × 13 = [ ]

b [ ] × 12 = [ ]

c [ ] × 13 = [ ]

Which strategy did you use and why?

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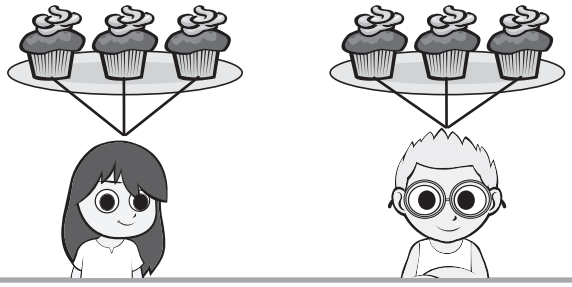
Division – sharing and grouping

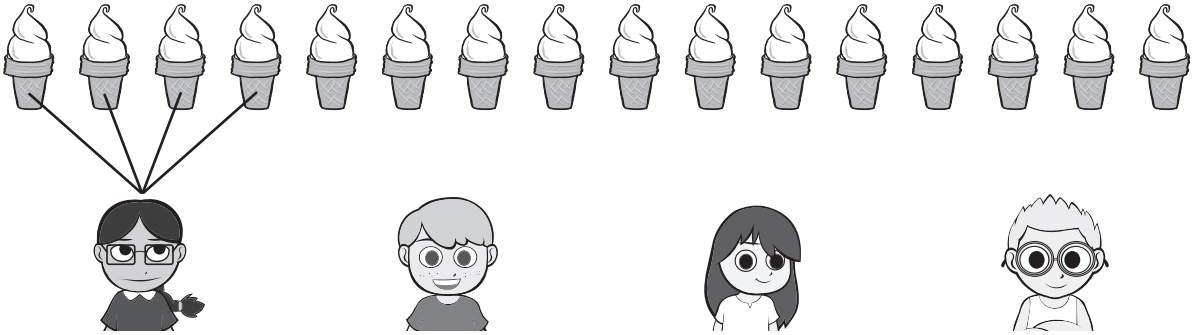
Division is when we make fair shares.

If we share these 6 cakes equally between 2 kids, they each get 3 cakes. We call these fair shares because each share is equal.

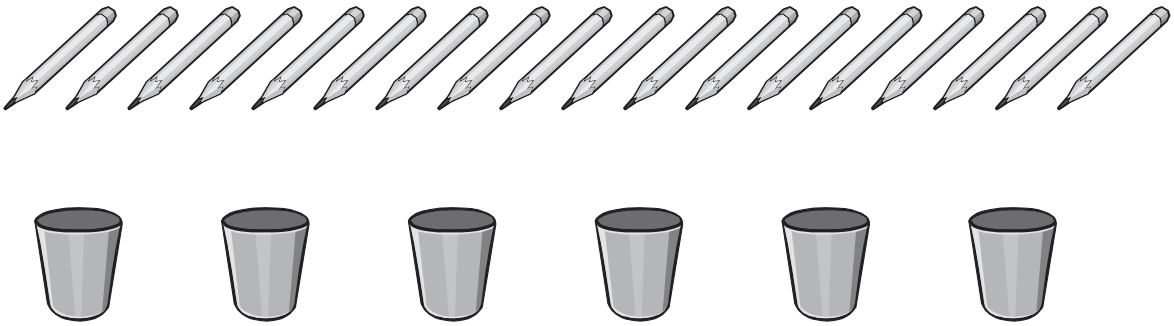


1 **Share the items equally in each picture by drawing lines to connect them. Write how many are in each share.**

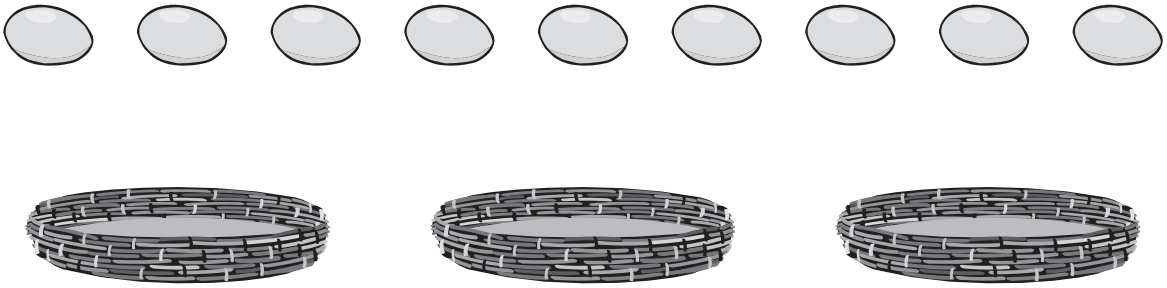
a Share these 16 ice creams between 4 kids. 4 equal shares = _____ each



b Share these 18 pencils between 6 pots. 6 equal shares = _____ each



c Share these 9 eggs between 3 baskets. 3 equal shares = _____ each



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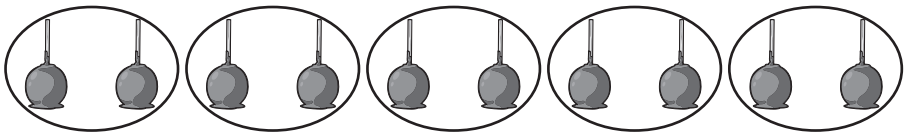
Division – sharing and grouping

Division is also when we make equal groups.

Here are 10 candy apples. How many bags do we need if we put 2 in each bag?



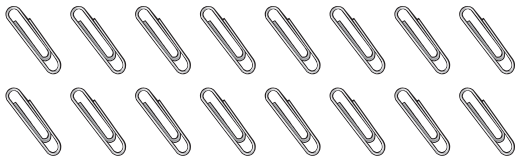
If we circle 2 candy apples in each group, we can make 5 groups. So, we need 5 bags.

2 **Circle equal groups in each picture and write how many are in each share:**

a

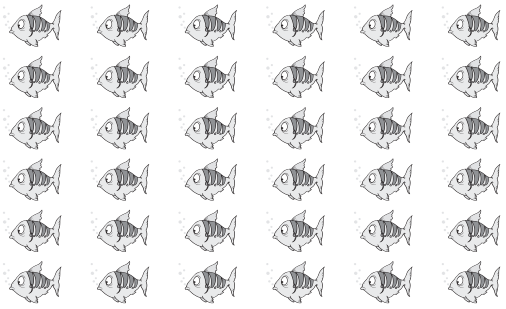
Out of 9 strawberries, how many groups are there if there are 3 in each group? ☐

b



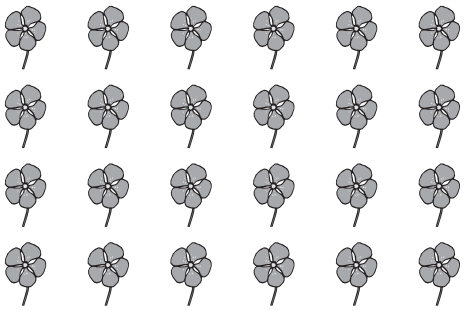
Out of 16 paper clips, how many groups are there if there are 4 in each group? ☐

c



Out of 36 fish, how many groups are there if there are 6 in each group? ☐

d



Out of 24 flowers, how many groups are there if there are 4 in each group? ☐

3 **Draw a picture to show 7 groups with 5 in each share.**

How many in total? ☐

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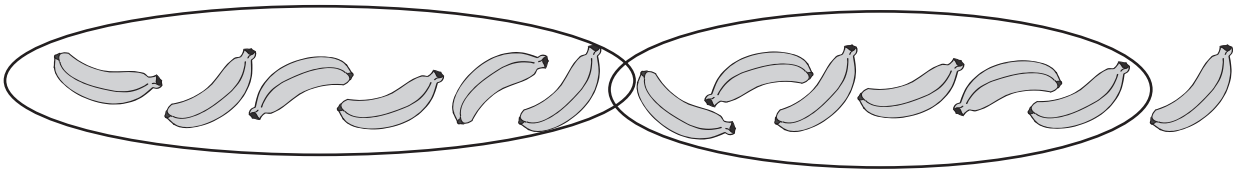
Division – left overs

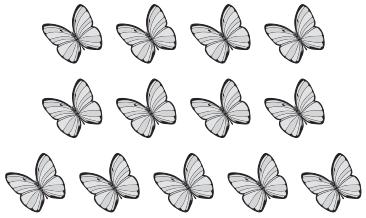
Sometimes when we make equal groups there are some left over.

Here are 13 bananas. If we make 2 equal groups of 6, there is 1 banana left over.



1 **Make groups of each of the following items and show the left overs:**

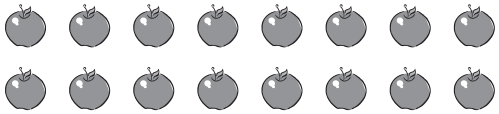
a Here are 13 butterflies:



If we make _____ equal groups

of 3 there is _____ left over.

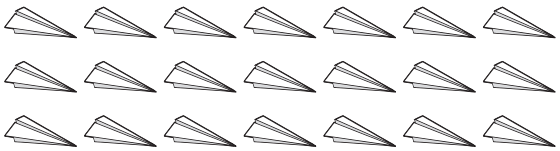
b Here are 16 apples:



If we make _____ equal groups

of 7 there are _____ left over.

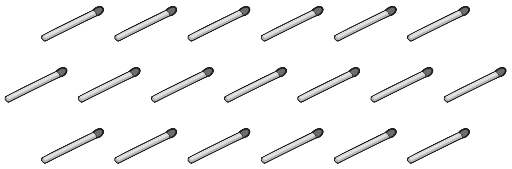
c Here are 21 paper planes:



If we make _____ equal groups

of 6 there are _____ left over.

d Here are 19 match sticks:



If we make _____ equal groups

of 5 there are _____ left over.

2 **Draw a picture to show 12 groups of 2 with 1 left over.**

How many are there in total? ☐

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Division – the division symbol

This is a division symbol ÷

So instead of saying 'Share 12 tennis balls fairly between 2 tennis players. How many balls do they each get?'

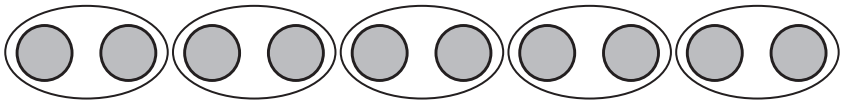
We can write: 12 ÷ 2 = 6

This says 12 divided by 2 is 6. It means that there are 2 groups of 6.

1 **Write the division facts using the division symbol for each picture:**

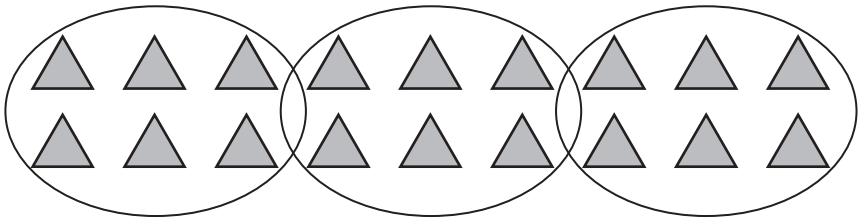
a 10 divided by 5

☐ ÷ ☐ = ☐



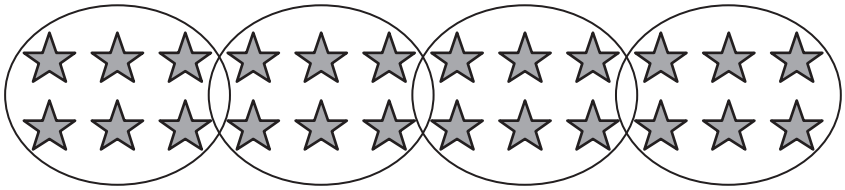
b 18 divided by 3

☐ ÷ ☐ = ☐



c 24 divided by 4

☐ ÷ ☐ = ☐



2 **Solve each of these division problems:**

a Share 15 lollies between 3 bowls. How many lollies are in each bowl?

☐ ÷ ☐ = ☐

b Share 20 oranges between 5 baskets. How many are in each basket?

☐ ÷ ☐ = ☐

c Out of a pile of 36 coloured pencils, 6 go into each pot. How many pots are needed?

☐ ÷ ☐ = ☐

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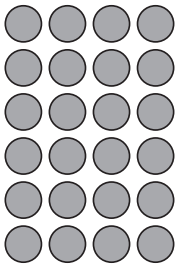
Division – linking multiplication and division facts

Knowing multiplication facts will help with division facts.

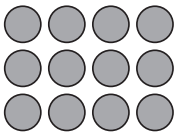


$6 \times 4 = 24$ 6 rows of 4 is 24.

$24 \div 4 = 6$ 24 divided into 4 shares is 6.

1 **Describe each of these arrays using one multiplication and one division fact:**

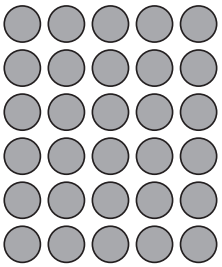
a



$\square \times 4 = 12$

$12 \div 4 = \square$

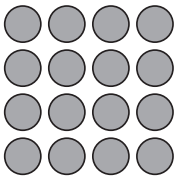
b



$\square \times 5 = 30$

$30 \div 5 = \square$

c

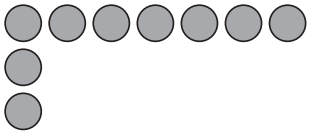


$\square \times 4 = 16$

$16 \div 4 = \square$

2 **This time, you are given part of the array. Complete the array and then write one multiplication and one division fact that matches:**

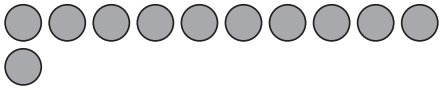
a



$\square \times \square = \square$

$\square \div \square = \square$

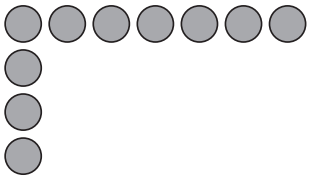
b



$\square \times \square = \square$

$\square \div \square = \square$

c



$\square \times \square = \square$

$\square \div \square = \square$

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Division – linking multiplication and division facts

3 **Play this memory game with a partner. The aim of this game is to find pairs of matching multiplication and division facts. Each player needs a copy of this page and to cut out their cards. Players join their cards together, shuffle and lay them face down. Take turns in turning over a pair of cards. If they match the player keeps the pair, if they don't match, they must be placed back in the same position. The winner is the player with the most pairs.**

16 ÷ 4	4 × 4
20 ÷ 4	4 × 5
12 ÷ 2	2 × 6
21 ÷ 3	3 × 7
8 ÷ 4	2 × 4
18 ÷ 2	2 × 9

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Highest product

apply

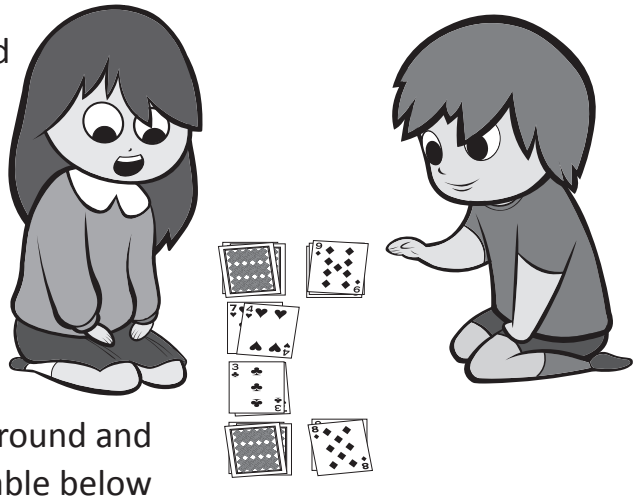
Getting ready

This is a game for two players. You will need a pack of playing cards but just the cards with numbers on them. You will also need a copy of this page so you can use the table to keep score.

C copy

What to do

Shuffle the cards well and deal them evenly so you each get 18 cards. Player 1 turns over two cards and finds the product by multiplying these together. Player 2 does the same. The highest answer wins the round and scores a point. Use the table below to keep track of your scores.



Player 1	Player 2

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Mystery numbers

solve

What to do

Read the clues to find out the mystery number:

I am a multiple of 6.

I am also a multiple of 4.

I am greater than 10, but less than 20.

I am greater than 5 × 6.

I am less than 40.

I am a square number.

I am smaller than 6 × 7.

I am bigger than 6 squared.

The sum of my digits is 12.

When I am multiplied by a die number, I make 20.

I am less than 5.

I am bigger than 7 × 9.

I am less than 7 × 11.

I am divisible by 10.

I am a factor of 48.

I am bigger than 4 squared.

I am smaller than 5 squared.

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Multiplication concentration

apply

Getting ready

This is a game for two players. Copy this page and page 35, and then cut out all the cards.

copy

What to do

Shuffle the cards well and lay them out face down in an array in two groups. The rectangles are the questions, the squares are the answers. Players take turns turning over one of each card. If they can make a multiplication fact, the player keeps the pair. Keep playing until there are no cards left. The winner is the player with the most matching pairs.

4 × 8	2 × 9	7 × 5	3 × 3
6 × 4	9 × 3	4 × 4	5 × 8
4 × 5	8 × 8	3 × 5	8 × 9
7 × 6	6 × 6	4 × 7	9 × 5
5 × 5	8 × 6	7 × 2	5 × 10

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3 × 7	3 × 10	
4 × 9	9 × 7	8 × 7

= 32	= 18	= 35	= 24	= 27
= 30	= 20	= 21	= 15	= 42
= 36	= 28	= 25	= 48	= 14
= 72	= 56	= 40	= 45	= 63
= 9	= 50	= 16	= 36	= 64

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Product bingo

apply

Getting ready

This is a game for four players. Each player needs a copy of this page and 5 counters. The group needs 2 dice. Make extra copies of this page so you can play again.

What to do

Choose one player to be the caller. The other players fill their grid with numbers from this list: 1, 2, 3, 4, 5, 6, 8, 9, 10, 12, 15, 16, 18, 20, 24, 25, 30 and 36.

The caller rolls the dice and calls out a times table fact based on the numbers rolled. For example, if they roll a 6 and a 5, they would say 6 × 5. If a player has 30 in their grid, they place a counter on the number. The winner is the first player to get rid of all their counters.

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