

# Multiply and Divide by 2

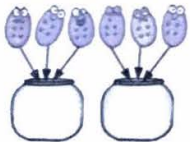
Tizz and Fizz are twins and they normally share everything between the two of them. Tizz wants to learn about multiplication and division families to help her understand grouping by 2.

Counting in equal groups is called **multiplication** (shown by  $\times$ ). These mini monsters are grouped into 2s.



$2 + 2 + 2 = 6$       3 lots of  $2 = 6$   
 $3 \times 2 = 6$  (this is a multiplication fact)

Sharing equally is called **division** (shown by  $\div$ ). These monsters are shared equally.



6 shared between 2 groups = 3  
 $6 \div 2 = 3$  (this is a division fact)  
 Half of 6 = 3.



1 Draw circles round the smees to make groups of 2. Complete the number sentences.



$2 + 2 + 2 + 2 + 2 + 2 = \square$

$\square$  lots of 2 =  $\square$

$\square \times 2 = \square$

How many groups of 2 in 12?

$\square \quad 12 \div 2 = \square$

2 Write the answers for each of these.

a  $2 \times 2 = \square$       e  $9 \times 2 = \square$       h  $3 \times 2 = \square$   
 b  $7 \times 2 = \square$       f  $5 \times 2 = \square$       i  $6 \times 2 = \square$   
 c  $1 \times 2 = \square$       g  $8 \times 2 = \square$       j  $10 \times 2 = \square$   
 d  $4 \times 2 = \square$

3 Use your multiplication facts to work these out.

a  $10 \div 2 = \square$       e  $18 \div 2 = \square$       h  $2 \div 2 = \square$   
 b  $4 \div 2 = \square$       f  $8 \div 2 = \square$       i  $12 \div 2 = \square$   
 c  $6 \div 2 = \square$       g  $16 \div 2 = \square$       j  $14 \div 2 = \square$   
 d  $20 \div 2 = \square$

## Fun Zone!

Write a monster rhyme. Here is an example of a monster rhyme about maths.

Well done! You can now find and colour **Shape 1** on the Monster Match page!

### Monster Rhyme

Monsters love maths because they are able,  
 To multiply numbers with the times table.

Sharing, grouping, halving and double,  
 Knowing the terms means maths is no trouble!

Monsters use number lines to help with their sums,  
 It is better than counting with fingers and thumbs!

So learn your times tables and do your revision,  
 To beat the monsters at multiplication and division

# Times Tables – 5 and 10

Tizz and Poggo are making monsterberry cakes. Tizz is making small cakes. Each cake contains 5 monsterberries. To make more cakes, she uses the **5 times table** to find the number of monsterberries she needs:

$$\begin{array}{ll} 2 \times 5 = 10 & 10 \div 5 = 2 \\ 3 \times 5 = 15 & 15 \div 5 = 3 \\ 4 \times 5 = 20 & 20 \div 5 = 4 \end{array}$$

Poggo is making big cakes. Each cake contains 10 monsterberries. To make more cakes, he uses the **10 times table**:

$$\begin{array}{ll} 2 \times 10 = 20 & 20 \div 10 = 2 \\ 3 \times 10 = 30 & 30 \div 10 = 3 \\ 4 \times 10 = 40 & 40 \div 10 = 4 \end{array}$$



1 Work out the answers then use them to find the letters in the grid. The letters spell out a monster's name.

A	N	E	R	J	K	G	O
5	10	15	20	25	30	35	40

a  $3 \times 10 = \square$     $8 \times 5 = \square$     $4 \times 5 = \square$     $25 \div 5 = \square$   
 LETTERS:  $\square$     $\square$     $\square$     $\square$

b  $7 \times 5 = \square$     $2 \times 10 = \square$     $25 \div 5 = \square$     $2 \times 5 = \square$   
 LETTERS:  $\square$     $\square$     $\square$     $\square$

2 Use your division facts to answer these.

a  $30 \div 10 = \square$    c  $40 \div 10 = \square$    e  $70 \div 10 = \square$   
 b  $50 \div 10 = \square$    d  $10 \div 10 = \square$    f  $100 \div 10 = \square$

3 Work out the answers to these.

a  $20 \div 5 = \square$    f  $10 \times 5 = \square$    k  $60 \div 10 = \square$   
 b  $7 \times 10 = \square$    g  $50 \div 10 = \square$    l  $6 \times 5 = \square$   
 c  $5 \div 5 = \square$    h  $1 \times 5 = \square$    m  $3 \times 5 = \square$   
 d  $40 \div 5 = \square$    i  $5 \times 10 = \square$    n  $80 \div 10 = \square$   
 e  $2 \times 5 = \square$    j  $45 \div 5 = \square$    o  $35 \div 5 = \square$

## Fun Zone!

Time to make a tube monster!

That's a great monster! You can now find and colour **Shape 2** on the Monster Match page!

### Tube Monsters

You will need a cardboard tube (e.g. toilet paper roll or kitchen paper roll tube), coloured paint, glue and decorations.

Ask an adult to help when needed.

- 1 Paint a monster face on the cardboard tube. Be as creative as you like.
- 2 Leave to dry and then glue bits of material or glitter on the monster tube for decoration.



# Odd and Even

Kora is learning about multiplication and division too. She and Tizz share some mini-monsters into groups of 2. Sometimes the numbers do not divide equally.

**Even** numbers can be equally shared into groups of 2.

**Odd** numbers always have one left over. 6 can be shared equally into 3 groups of 2.



5 cannot be shared equally. 1 is left by itself.



To tell if a big number is odd or even, look at the units digit.

15 is odd because 5 is odd.

16 is even because 6 is even.



2 Draw lines to match these numbers to the odd or even eyeball.



2 5 12 15 19 20 1 10 8 7

3 Find the secret word by colouring all the even numbers. Remember, all the numbers in the 2 times table are even.

3	8	14	10	1	6	4	20	11	6	1	17	9	12	3
9	11	6	7	3	18	15	19	7	10	14	13	7	16	5
5	7	12	5	13	14	12	8	3	4	11	18	1	8	19
15	3	20	17	19	4	11	17	5	20	15	13	12	4	1
19	17	2	1	13	6	10	18	19	16	17	11	3	2	13

The secret word is

1 Draw circles to put these quiffs into groups of 2. Count how many quiffs there are altogether and write **odd** or **even** for each total.

The first one has been done for you.



Total  odd or even?



Total  odd or even?



Total  odd or even?

## Fun Zone!

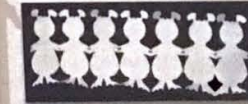
Time to make a monster paper chain.

Well done! You can now find and colour **Shape 3** on the Monster Match page!

### Monster Paper Chain

You will need a long strip of paper, a pencil and scissors.

Ask an adult to help when needed.

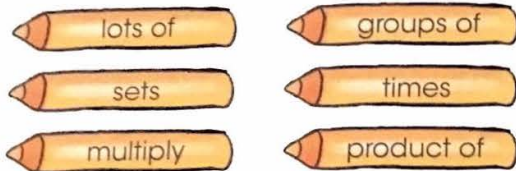


- 1 Fold your piece of paper accordion style.
- 2 Draw a monster on the top panel, making sure that the arms touch the sides of the panel.
- 3 Cut round the monster, but do not cut where the arms touch the fold.
- 4 Unfold the paper and you should have a chain of paper monsters!



# Multiplication Words

I am explaining to Kora that all these words mean **multiplication**.



The answer to a multiplication fact is called a **multiple**.

10, 20, 30, 40 are multiples of 10.

**Double** is a special word for multiplying by 2. Double 10 means 2 lots of 10, so  $2 \times 10 = 20$ .

1 Here are **groups of** mini-monsters. Count the number of groups. Then count the number in each group and work out the total.



groups of  =   $\times$   =



groups of  =   $\times$   =



groups of  =   $\times$   =

2 Count the babbles, then draw a matching set to double the number. Complete each number sentence. The first one has been done for you.



$\times$   =

$\times$   =

$\times$   =

3 Complete the grid by finding the multiples of 10. Two examples have been done for you.

6	2	4
1	5	7
8	3	9

$\times 10$

60		
		70

## Fun Zone!

Creating a monster story is a fun idea to do with friends and family.

That is a good story! You can now find and colour **Shape 4** on the Monster Match page!

### Monster Stories

You will need one piece of paper and a pencil for each person. Ask an adult to help when needed.



1 At the top of the piece of paper, one person should write the name of their monster and an interesting fact.

2 Fold the top of the paper over (so the writing is hidden) and pass it on to the next person.

3 Each person should write a sentence about the monster, then fold over the paper again and pass it on to the next person. Continue doing this until the paper is full.

4 Unfold the paper and read the monster story!

5 Here are some suggestions for sentences. Where did the monster go? What was the monster wearing? What did the monster say?

# 5s and 10s

Tizz is playing with Nano. She notices that his monster-suit has a pattern on it.

There are lots of patterns in numbers too.

Look for patterns in number sequences and number grids like these.



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

The shaded numbers in the grid are all multiples of 5. Here are the same numbers written as a sequence:

5	10	15	20	25
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1 Continue these number sequences.

a

b

c

d

2

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

a Colour the numbers in the 5 times table yellow. Draw a blue circle around the numbers in the 10 times table. What patterns do you notice?

b Draw a red circle around the numbers in the 2 times table. Have you put a red circle around any of the yellow or blue circle numbers? \_\_\_\_\_

c Write the first 5 numbers that all appear in the 2, 5 and 10 times tables.

<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
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## Fun Zone!

Write the numbers as words in the boxes. The shaded letters spell out a number, what is it?

16									
11									
17									
20									
9									

Congratulations! You can now find and colour **Shape 5** on the Monster Match page!

The shaded word is

# Monster Multiplication

Tizz is working out how many monsterberries are in her cakes.  
 Each cake contains 5 monsterberries.  
 2 cakes containing 5 monsterberries equals  
 10 monsterberries in total.

Multiplication can be done in **any order**.  
 $2 \times 5 = 5 \times 2$   
 $5 \times 10 = 10 \times 5$

This means you can find multiplication facts for tables you have not learned yet.

$2 \times 6$  becomes  $6 \times 2 \dots$   
 6 lots of 2... 2, 4, 6, 8, 10, 12  
 $2 \times 6 = 6 \times 2 = 12$



- 1 Complete these multiplication grids.  
 For each square multiply the top number by the number on the far left.  
 Some examples have been done for you (in **a**,  $3 \times 10$  or  $10 \times 3 = 30$ ).

**a**

×	<b>3</b>	<b>2</b>	<b>5</b>
<b>10</b>	30		
<b>5</b>			
<b>2</b>			

**c**

×	<b>4</b>	<b>5</b>	<b>3</b>
<b>10</b>			
<b>2</b>			
<b>5</b>		25	

**b**

×	<b>2</b>	<b>10</b>	<b>5</b>
<b>4</b>			20
<b>3</b>			
<b>10</b>			

**d**

×	<b>10</b>	<b>1</b>	<b>5</b>
<b>4</b>			
<b>2</b>			
<b>6</b>			

- 2 Colour the mugs to show the groups.

**a**  $5 \times 2$

$2 \times 5$

**b**  $2 \times 10$

$10 \times 2$

- 3 Complete the number sentences by turning these multiplications around to make them easier.

**a**  $2 \times 7 = \boxed{7} \times \boxed{2} = \boxed{\quad}$

**b**  $5 \times 4 = \boxed{\quad} \times \boxed{5} = \boxed{\quad}$

**c**  $2 \times 9 = \boxed{\quad} \times \boxed{\quad} = \boxed{\quad}$

**d**  $10 \times 4 = \boxed{\quad} \times \boxed{\quad} = \boxed{\quad}$

## Fun Zone!

Practise your monster walk!

Scary! You can now find and colour **Shape 6** on the Monster Match page!

Can you do different walks?  
 A stomping walk, a hunched walk, a walk using scary monster hands, a bow-legged walk.

Practise with your friends and family. Who can do the best monster walk?

# Monster Challenge 1

1 Work out the answers to these.

a  $4 \times 2 =$

d  $2 + 2 =$

b  $12 \div 2 =$

e  $18 \div 2 =$

c  $9 \times 2 =$

f  $10 \times 2 =$

2 Write the answers to each of these.  
Use 10 times table facts to help you.

a  $20 \div 10 =$

e  $60 \div 10 =$

h  $40 \div 10 =$

b  $50 \div 10 =$

f  $80 \div 10 =$

i  $100 \div 10 =$

c  $10 \div 10 =$

g  $30 \div 10 =$

j  $70 \div 10 =$

d  $90 \div 10 =$

3 Colour the odd numbers red.

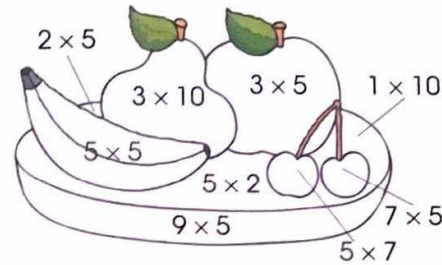
a  1  2  3  4  5  6  7

b  11  12  13  14  15  16  17

c  20  25  30  35  40  45  50

d  26  25  24  23  22  21  20

4 Work out the answer to each multiplication.  
Use the answer and the code key to colour the picture.



CODE: 10 = orange  
15 = light red  
25 = yellow  
30 = light green  
35 = dark red  
45 = dark green

5 Complete these sequences.

a 

30	<input type="text"/>	20	<input type="text"/>	10	<input type="text"/>	0
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b 

18	<input type="text"/>	<input type="text"/>	12	<input type="text"/>	<input type="text"/>
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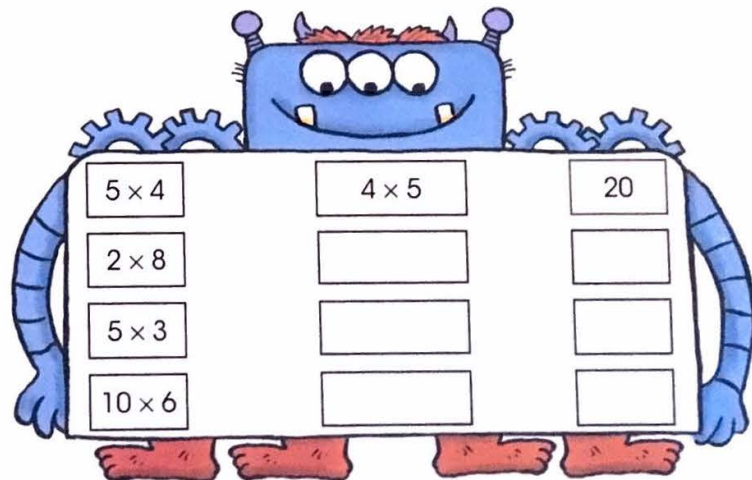
c 

60	<input type="text"/>	<input type="text"/>	90	<input type="text"/>
----	----------------------	----------------------	----	----------------------

d 

15	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	40
----	----------------------	----------------------	----------------------	----------------------	----

6 Flip the multiplication facts and work out the answers.  
The first one has been done for you.



# Grouping Numbers

Tizz has gone for a walk in the wild wood with Grandpa. They are collecting squints.

Here is one group of 12 squints.



1 group of 12 = 12.

They can be grouped in lots of different ways:



We can group and share other numbers in different ways. Remember that each group must have the same number.



1 15 babbles have been grouped in four different ways. Complete the matching number sentence for each.

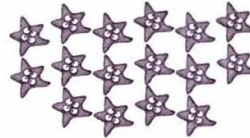
a  x 5 =

b  x 3 =

c 1 x  =

d  x 1 =

2 Choose two different ways to group these babbles. Write a number sentence for each. Remember to work out the total.


3 Draw the jumps on each number line to help complete the number sentences.

a  $4 \times 3 =$   0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

b  $3 \times 4 =$   0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

c  $4 \times 4 =$   0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

d  $5 \times 3 =$   0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

e  $3 \times 5 =$   0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

## Fun Zone!

Complete this maths crossword.

Monsterific! You can now find and colour **Shape 7** on the Monster Match page!

### Across

3 Used to share numbers

5 A group of objects divided by 2



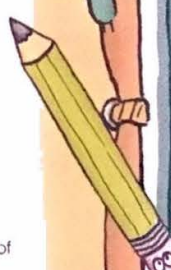
### Down

1 Another word for multiply

2 2, 6 and 10 are examples of these numbers

3 A word meaning multiplying by 2

4 1, 3 and 5 are examples of these numbers





# Sharing and Grouping

Litmus is helping Tizz understand sharing and grouping equally. He is using some jars from the laboratory.

15 mini-monsters are shared equally between three jars.



15 shared equally between 3 gives 5 each.  
3 groups of 5 = 15.  
 $15 \div 3 = 5$

15 divided into 3 groups = 5 each.  
15 grouped into 5s = 3 groups.  
5 groups of 3 = 15.  
 $15 \div 5 = 3$



- 1 Draw lines to share the squirts equally between the jars and write the number sentence. The first one has been done for you.

a 9 shared by 3  $9 \div 3 = 3$

b 10 shared by 5 \_\_\_\_\_

c 8 shared by 2 \_\_\_\_\_

d 12 shared by 4 \_\_\_\_\_

- 2 Draw circles to group the mini-monsters into 3s, and count the groups. Write the missing numbers and the division sign.



15 grouped into 3s makes  groups.

15  5 is



12 grouped into 3s makes  groups.

12  4 is

- 3 Draw circles around the mini-monsters to show the groups. Count the groups and write how many are in each.

a 9 divided by 3 is  groups of

b 20 divided by 5 is  groups of

## Fun Zone!

Time to make some modelling monsters!

Well done! You can now find and colour **Shape 8** on the Monster Match page!

### Monster Modelling Dough

You will need flour (1 cup), salt ( $\frac{1}{2}$  cup), water ( $\frac{1}{2}$  cup), bowl (for mixing) and food colouring.

Ask an adult to help when needed.



- 1 Measure the ingredients.
- 2 Add the flour, salt and water to the bowl and stir until they are well mixed.
- 3 Add a few drops of food colouring and then kneed the mixture.
- 4 You now have crafting dough - if it's too sticky, add a bit more flour, or more water if it's too dry.
- 5 Create a monster shape with the modelling dough. You can use material or any accessories to add to your monster.
- 6 Your monster will dry over time.

# Disappearing Digits

I am sticking photographs into an album.  
How many go on each page?

There is a close link between  
multiplication and division.

I have 5 pages in my album and 10  
photographs.

I will use this to try and work out how  
many photographs go on each page.

I know  $5 \times 2 = 10$  so  $10 \div 5 = 2$ .

That is 2 photographs on each page.

These three numbers belong to a  
calculation family.

Opposite calculations are called  
**inverse** calculations.



3

Write the missing numbers.

Remember,  $9 \times 2 = 18$  and  $18 \div 2 = 9$ .

a  $6 \times 3 = \square$   
 $\square \div 3 = 6$

d  $8 \times 3 = \square$   
 $\square \div 3 = 8$

g  $4 \times 10 = \square$   
 $\square \div 10 = 4$

b  $8 \times 2 = \square$   
 $\square \div 2 = 8$

e  $5 \times 5 = \square$   
 $\square \div 5 = 5$

h  $7 \times 3 = \square$   
 $\square \div 3 = 7$

c  $3 \times 5 = \square$   
 $\square \div 5 = 3$

f  $10 \times 2 = \square$   
 $\square \div 2 = 10$

i  $6 \times 10 = \square$   
 $\square \div 10 = 6$

## Fun Zone!

Solve the clues  
to find things  
you might see  
in a park. The  
shaded letters  
spell out a  
maths term.  
What is it?

Well done! You  
can now find  
and colour  
**Shape 9** on  
the Monster  
Match page!

A feathered, flying creature

A smooth, sloping surface that you  
travel down

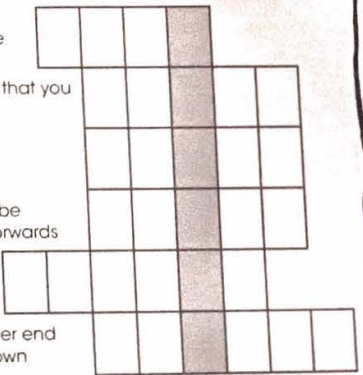
A flowing stream of water

A hanging seat that can be  
moved backwards and forwards

White, fluffy objects high  
in the sky

A plank with seats at either end  
that you push up and down

The shaded word is



1 Write the answer to the multiplication.  
Use the calculation family to work out the inverse.

a  $6 \times 2 = \square$       b  $4 \times 5 = \square$       c  $4 \times 3 = \square$   
 $12 \div 2 = \square$        $20 \div 5 = \square$        $12 \div 3 = \square$

2 Use the link between multiplication and division to write  
the answers to these pairs of calculations.

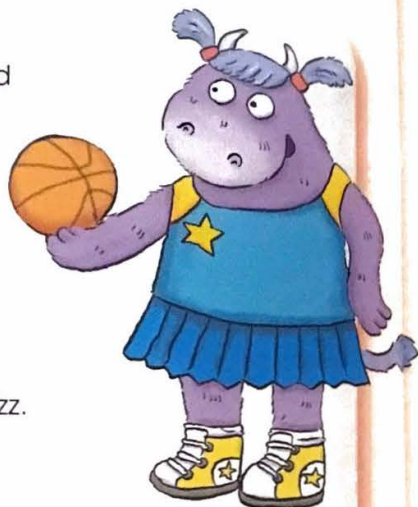
a  $10 \times 5 = \square$       b  $4 \times 2 = \square$       c  $3 \times 10 = \square$   
 $50 \div 5 = \square$        $8 \div 2 = \square$        $30 \div 10 = \square$

# 1-Step Multiplication

Fizz collects monster cards. She is using her cards to understand multiplication problems.

Multiplication problems become easier if you learn your facts. You could use a number line too. What do you need to count in? How many jumps?

Fizz has 4 cards.  
Kora has 3 times more cards than Fizz.  
How many cards does Kora have?  
What is 3 times 4?



$3 \times 4 = 12$  Kora has 12 cards

1 Write the multiplication fact for each problem to find the answer. The first one has been done for you.

a Nano has 5 monster toys, but Poggo has double this. How many toys does Poggo have?

Poggo has  $5 \times 2 = 10$  toys.

b If 1 monster has 4 eyes, how many eyes do 3 monsters have?

\_\_\_\_\_

c Kora, Litmus and Fizz each have 2 buns. How many buns do they have altogether?

\_\_\_\_\_

2 Work out how much money is in each purse.



$6 \times 2p = \square p$



$9 \times 1p = \square p$



$7 \times 10p = \square p$



$7 \times 5p = \square p$

3 Answer each question below.

a 1 monster has 5 eyes. How many eyes do 4 monsters have?  eyes

b One snake is 2 metres long whilst another snake is twice as long. What is the length of the longest snake?  metres

c There are 2 shoes in a pair of shoes. How many shoes are there in 7 pairs?  shoes

## Fun Zone!

Find the five differences between these pictures of Tizz.



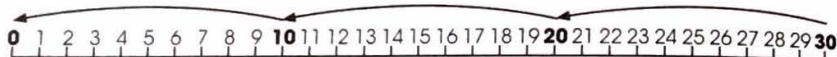
Well done! You can now find and colour **Shape 10** on the Monster Match page!

# 1-Step Division

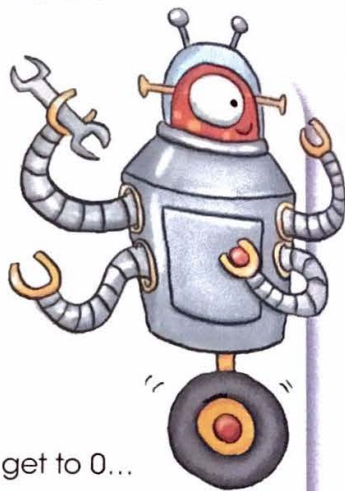
You can use multiplication facts and calculation families to solve division problems.

Otto has 30 spanners that he needs to put into toolboxes. Each toolbox holds 10 spanners. How many toolboxes does Otto need?

Using a number line, you can jump backwards in groups of 10. You can count the number of groups to get to 0...



30 grouped into 10s = 3, so we know Otto needs 3 toolboxes.  
 $3 \times 10 = 30$  so,  $30 \div 10 = 3$ .



1 Write the multiplication fact to help you answer these. Then work out the division fact and answer. The first one has been done for you.

- a Fizz and Tizz share 16 sweets equally between them. How many do they have each?

I know 8 lots of  $2 = 16$  so  $16 \div 2 = 8$  Answer =

- b Tizz shares 20 pencils equally between 5 friends. How many do they have each?

\_\_\_\_\_ Answer =

- c Otto divides 12 spanners into 3 equal groups. How many are there in each group?

\_\_\_\_\_ Answer =

2 Answer these and draw the correct number of coins.

- a  $40p = \square \times 10p$  coins
- b  $30p = \square \times 5p$  coins
- c  $12p = \square \times 2p$  coins
- d  $20p = \square \times 5p$  coins

3 Answer these. Remember, **half** means **divide by 2**.

- a There are 20 apples in a basket. Half the apples are red. How many apples are red?  apples
- b A full packet has 10 biscuits. Half the packet has been eaten. How many biscuits have been eaten?  biscuits
- c Tizz has a ribbon 8 centimetres long. She gives half the length of ribbon to Fizz. What length do they each have?  centimetres

## Fun Zone!

Make a monster face from different shapes!

Monsterific! You can now find and colour **Shape 11** on the Monster Match page!

### Monster Face

You will need coloured paper, crayons, scissors and glue.

Ask an adult to help when needed.



1 Use the coloured paper to draw and cut out some hair for your monster.

2 Cut out large white circles and some smaller black circles. Glue the small circles onto the white circles for eyes.

3 Cut out some teeth and any other decorations. You could attach the face to a wall or door using some reusable adhesive putty (Blue Tack™).

# Fractions

Tizz is sharing 8 monster bites with Fizz. When a number is shared, each group is a part of the total. Each part is called a **fraction**.

To find a **half** ( $\frac{1}{2}$ ), we share into 2 equal groups.



One half of 8 =  $8 \div 2 = 4$ .

To find a **quarter** ( $\frac{1}{4}$ ), we share into 4 equal groups.



One quarter of 8 =  $8 \div 4 = 2$ .

Half of  $\frac{1}{2} = \frac{1}{4}$ .

3 parts out of 4 parts is called **three quarters** ( $\frac{3}{4}$ ).

If we share into 3 equal groups, each part is called a **third** ( $\frac{1}{3}$ ).

One third of 6 =  $6 \div 3 = 2$ .



2 Circle  $\frac{1}{3}$  of each of these boggle groups. Write the division number sentence.



$$9 \div 3 = \square$$



$$\square = \square$$



$$\square = \square$$



$$\square = \square$$

1 Colour half of these mini-monsters red. Circle the mini monsters into **4 equal groups** to find  $\frac{1}{4}$ . Complete the number statements.

a  $12 \div 2 = \square$  Half of 12 =  $\square$   
 $12 \div 4 = \square$  Quarter of 12 =  $\square$

b  $16 \div 2 = \square$  Half of 16 =  $\square$   
 $16 \div 4 = \square$  Quarter of 16 =  $\square$

c  $20 \div 2 = \square$  Half of 20 =  $\square$   
 $20 \div 4 = \square$  Quarter of 20 =  $\square$

## Fun Zone!

Find the words in the word search.

You are a clever monster! You can now find and colour **Shape 12** on the Monster Match page!

FRACTION  
 QUARTER  
 EQUAL  
 SHARING

DIVISION  
 MULTIPLY  
 GROUPING

C	F	N	L	A	U	Q	E
N	O	I	S	I	V	I	D
S	H	A	R	I	N	G	J
Q	U	A	R	T	E	R	B
G	N	I	P	U	O	R	G
Y	L	P	I	T	L	U	M
B	R	I	N	V	V	N	L
F	R	A	C	T	I	O	N

# Monster Challenge 2

1 Here are 24 mini-monsters.



Group them in twos, threes and fours.  
Write the number of groups for each one.

- a  $24 = \square$  groups of 2  
 b  $24 = \square$  groups of 3  
 c  $24 = \square$  groups of 4

2 Complete these patterns.

a	<input type="text"/>	6	<input type="text"/>	12	15
b	20	<input type="text"/>	28	32	<input type="text"/>
c	30	27	24	<input type="text"/>	<input type="text"/>
d	50	45	40	<input type="text"/>	<input type="text"/>
e	12	<input type="text"/>	20	<input type="text"/>	<input type="text"/>

3 Draw stars to show the following number sentences.

a  $3 \times 4 = 12$

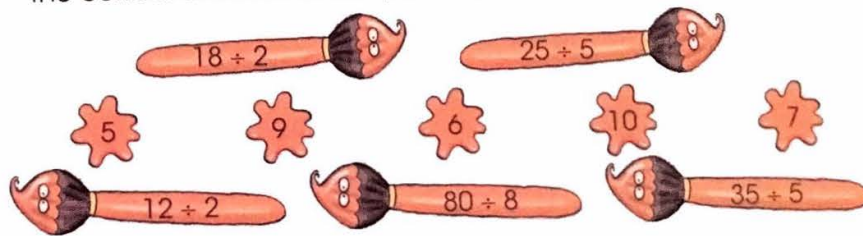
b  $12 \div 3 = 4$

4 Use your times tables and this grid to solve these puzzles.

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 Litmus counts in 2s while Poggo counts in 5s.  
Eventually they both reach the same number.  
What is the number?
- b Poggo counts in 3s and Litmus counts in 4s.  
Eventually they both reach the same number.  
What is the number?
- c Litmus jumps in 4s and Poggo jumps in 10s.  
Eventually they both reach the same number.  
What is the number?

5 Draw lines from the questions on the paintbrushes to the correct answers on the paint splats.



6 Draw some circles and colour them to show these fractions. The first one has been done for you.

- a  $\frac{1}{2}$  of 6
- b  $\frac{1}{3}$  of 6
- c  $\frac{1}{4}$  of 12

I knew you could do it!  
You have made it to the end of the book.  
You are a magnificent monster!

# Answers

## Page 2

- 1  $2 + 2 + 2 + 2 + 2 = 10$   
 6 lots of 2 = 12     $6 \times 2 = 12$   
 How many groups of 2 in 12? 6  
 $12 \div 2 = 6$

## Page 3

- 2 a 4 c 2 e 18 g 16 i 12  
 b 14 d 8 f 10 h 6 j 20  
 3 a 5 c 3 e 9 g 8 i 6  
 b 2 d 10 f 4 h 1 j 7

## Page 4

- 1 a 30, 40, 20, 5 KORA  
 b 35, 20, 5, 10 GRAN

## Page 5

- 2 a 3 b 5 c 4 d 1 e 7 f 10  
 3 a 4 d 8 g 5 j 9 m 15  
 b 70 e 10 h 5 k 6 n 8  
 c 1 f 50 i 50 l 30 o 7

## Page 6

- 1 a Total 8 even b Total 11 odd c Total 14 even

## Page 7

- 2 odd - 5, 15, 19, 1, 7 even - 2, 12, 20, 10, 8  
 3 The secret word is TEN

## Page 8

- 1 a 6 groups of 5 =  $6 \times 5 = 30$   
 b 2 groups of 5 =  $2 \times 5 = 10$   
 c 5 groups of 2 =  $5 \times 2 = 10$

## Page 9

- 2 a  $2 \times 3 = 6$   
 b  $2 \times 5 = 10$   
 c  $2 \times 7 = 14$

3	60	20	40
	10	50	70
	80	30	90

## Page 10

- 1 a 30 40 50 60 70 80 90  
 b 0 5 10 15 20 25 30 35  
 c 80 70 60 50 40 30 20 10  
 d 50 45 40 35 30 25 20 15

## Page 11

2	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

## a Pattern noticed:

- Misses 5 and lands on 10 then misses 15 and lands on 20.
- Misses 1st yellow and lands on 2nd yellow, misses 3rd and lands on 4th.
- Every other yellow number is blue as well.
- 2 jumps of 5 make 10 so every other yellow number is blue as well.

## b Yes

- c First five numbers: 10, 20, 30, 40, 50

## Fun zone

16		S	I	X	T	E	E	N
11		E	L	E	V	E	N	
17	S	E	V	E	N	T	E	E
20	T	W	E	N	T	Y		
9	N	I	N	E				

The shaded word is: seven

## Page 12

a

x	3	2	5
10	30	20	50
5	15	10	25
2	6	4	10

c

x	4	5	3
10	40	50	30
2	8	10	6
5	20	25	15

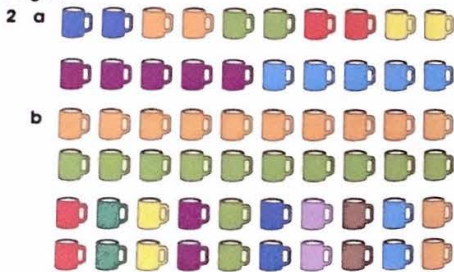
b

x	2	10	5
4	8	40	20
3	6	30	15
10	20	100	50

d

x	10	1	5
4	40	4	20
2	20	2	10
6	60	6	30

## Page 13



- 3 a  $2 \times 7 = 7 \times 2 = 14$     c  $2 \times 9 = 9 \times 2 = 18$   
 b  $5 \times 4 = 4 \times 5 = 20$     d  $10 \times 4 = 4 \times 10 = 40$

## Page 14

- 1 a 8 b 6 c 18 d 1 e 9 f 20  
 2 a 2 c 1 e 6 g 3 i 10  
 b 5 d 9 f 8 h 4 j 7  
 3 Numbers coloured red:  
 a 1, 3, 5, 7    c 25, 35, 45  
 b 11, 13, 15, 17    d 25, 23, 21

## Page 15

- 4
- 5 a 30, 25, 20, 15, 10, 5, 0    c 60, 70, 80, 90, 100  
 b 18, 16, 14, 12, 10, 8    d 15, 20, 25, 30, 35, 40  
 6  $5 \times 4 \rightarrow 4 \times 5 \rightarrow 20$   
 $2 \times 8 \rightarrow 8 \times 2 \rightarrow 16$   
 $5 \times 3 \rightarrow 3 \times 5 \rightarrow 15$   
 $10 \times 6 \rightarrow 6 \times 10 \rightarrow 60$

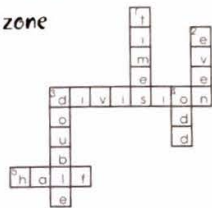
## Page 16

- 1 a  $3 \times 5 = 15$     c  $1 \times 15 = 15$   
 b  $5 \times 3 = 15$     d  $15 \times 1 = 15$

## Page 17

- 2  $8 \times 2 = 16$ ,  $4 \times 4 = 16$ ,  $1 \times 16 = 16$ ,  $16 \times 1 = 16$ ,  
 $2 \times 8 = 16$   
 3 a 3, 6, 9, 12    c 4, 8, 12, 16    e 5, 10, 15  
 b 4, 8, 12    d 3, 6, 9, 12, 15

## Fun zone



## Page 18

- 1 a  $9 + 3 = 3$     c  $8 + 2 = 4$   
 b  $10 + 5 = 2$     d  $12 + 4 = 3$

## Page 19

- 2 a 15 grouped into 3s makes 5 groups.  
 $15 \div 3 = 5$   
 b 12 grouped into 3s makes 4 groups.  
 $12 \div 3 = 4$   
 3 a 3 groups of 3    b 4 groups of 5

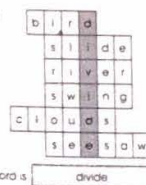
## Page 20

- 1 a  $6 \times 2 = 12$ ,  $12 \div 2 = 6$   
 b  $4 \times 5 = 20$ ,  $20 \div 5 = 4$   
 c  $4 \times 3 = 12$ ,  $12 \div 3 = 4$   
 2 a  $10 \times 5 = 50$ ,  $50 \div 5 = 10$   
 b  $4 \times 2 = 8$ ,  $8 \div 2 = 4$   
 c  $3 \times 10 = 30$ ,  $30 \div 10 = 3$

## Page 21

- 3 a 18    c 15    e 25    g 40    i 60  
 b 16    d 24    f 20    h 21

## Fun zone



The shaded word is: divide

## Page 22

- 1 b Three monsters have  $3 \times 4 = 12$  eyes  
 c They have  $3 \times 2 = 6$  buns altogether

## Page 23

- 2 a 12p b 70p c 9p d 35p  
 3 a 20 eyes    b 4 metres    c 14 shoes

## Fun zone



## Page 24

- a I know 8 lots of 2 = 16 so  $16 \div 2 = 8$   
 b I know 5 lots of 4 = 20, so  $20 \div 5 = 4$   
 Answer = 4  
 c I know 4 lots of 3 = 12, so  $12 \div 3 = 4$   
 Answer = 4

## Page 25

- 2 a 4 x 10p coins    c 6 x 2p coins  
 b 6 x 5p coins    d 4 x 5p coins  
 3 a 10 apples    b 5 biscuits    c 4 centimetres

## Page 26

- 1 a  $12 \div 2 = 6$ , Half of 12 = 6  
 $12 \div 4 = 3$ , Quarter of 12 = 3  
 b  $16 \div 2 = 8$ , Half of 16 = 8  
 $16 \div 4 = 4$ , Quarter of 16 = 4  
 c  $20 \div 2 = 10$ , Half of 20 = 10  
 $20 \div 4 = 5$ , Quarter of 20 = 5

## Page 27

- 2 a  $9 + 3 = 3$     c  $3 + 3 = 1$   
 b  $12 + 3 = 4$     d  $15 + 3 = 5$

## Fun zone

C	F	N	L	A	U	Q	E
N	O	I	S	I	V	I	D
S	H	A	R	I	N	G	J
Q	U	A	R	T	E	R	B
G	N	I	P	U	O	P	G
Y	L	P	I	T	L	U	M
B	R	I	N	V	V	N	L
F	R	A	C	T	I	O	N

## Page 28

- 1 a 12    b 8    c 6  
 2 a 3, 6, 9, 12, 15    d 50, 45, 40, 35, 30  
 b 20, 24, 28, 32, 36    e 12, 16, 20, 24, 28  
 c 30, 27, 24, 21, 18

- 3 a
- b

## Page 29

- 4 a 10    b 12    c 20  
 5  $18 \div 2 = 9$ ,  $25 \div 5 = 5$ ,  $12 \div 2 = 6$ ,  $80 \div 8 = 10$ ,  
 $35 \div 5 = 7$   
 6 a
- b
- c