St Denys Primary School

Year 3 and Year 4

Home Learning

Week beginning: 6th July 2020

Creativity, Choice, Challenge
Achievement for All

Year 3 and Year 4 - Home Learning

Whilst we are not expecting you to replicate school at home, it will be important that you all try to do some work each school day to keep your skills up.

And don't forget to stay active!

In this booklet you will find a range of different activities and tasks that you can choose to complete during the week.

There is also a separate booklet for each class that will contain your new spelling words and your daily Times Table Rockstar challenge. These can be collected from the school office or downloaded online.

Each morning your teacher will still be saying 'Hello' on Class Dojo. You'll also be able to ask any questions or just them about what you have been up to! As your teachers will be in school, remember they might not be able to respond straight away. You will still be able to post things to your Class Dojo portfolio but it might not always be your teacher who approves and leaves comments for you.

Class 3, if you want to try some online lessons, check out BBC Bitesize.

Year 3/ P4 online lessons

Monday 6 July - Friday 10 July

BBC Bitesize Daily lessons

Monday	Tuesday	Wednesday	Thursday	Friday
English Revising subordinating conjunctions	**English** Newspaper features	**English** Using alliteration to write headlines	**English** Revising word types	**English** Reading lesson: TBC
Maths Measure mass in grams and kilograms	**Maths** Comparing mass	**Maths** Add and subtract masses	**Maths** Measure capacity in millilitres and litres	**Maths** Challenge of the week
Arts Week Musical performance	**Arts Week** Artists and art	**Arts Week** Drama and theatre	**Arts Week** Singing and wellbeing	**Arts Week** Ten pieces takeover

Find all this content and more at: **bbc.co.uk/bitesize/dailylessons**

Lessons are available daily. Here is the schedule for this week.

Class 4, if you want to try some online lessons, check out BBC Bitesize.

Year 4/ P5 online lessons

Monday 6 July - Friday 10 July

BBC Bitesize Daily lessons

Monday	Tuesday	Wednesday	Thursday	Friday
English Revising conjunctions	**English** Newspaper features	**English** Using alliteration to write headlines	**English** Writing a newspaper report	**English** Reading lesson: TBC
Maths Identifying angles	**Maths** Angles, comparing and ordering	**Maths** Classifying triangles	**Maths** Classifying quadrilaterals	**Maths** Challenge of the week
Arts Week Musical performance	**Arts Week** Artists and art	**Arts Week** Drama and theatre	**Arts Week** Singing and wellbeing	**Arts Week** Ten pieces takeover

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Year 3 and Year 4 Spelling Words

accident (ally)	disappear	interest	pressure
actual (ly)	early	island	probably
address	earth	knowledge	promise
answer	eight/eighth	learn	purpose
appear	enough	length	quarter
arrive	exercise	library	question
believe	experience	material	recent
bicycle	experiment	medicine	regular
breath	extreme	mention	reign
breathe	famous	minute	remember
build	favourite	natural	sentence
busy/business	February	naughty	separate
calendar	forward (s)	notice	special
caught	fruit	occasion (ally)	straight
centre	grammar	often	strange
century	group	opposite	strength
certain	guard	ordinary	suppose
circle	guide	particular	surprise
complete	heard	peculiar	therefore
consider	heart	perhaps	though/although
continue	height	popular	thought
decide	history	position	through
describe	imagine	possess (ion)	various
different	increase	possible	weight
difficult	important	potatoes	woman/women

Colour in the word if you can read it, spell it and use it in your own sentence.

Y3/4 Spellings Words Search

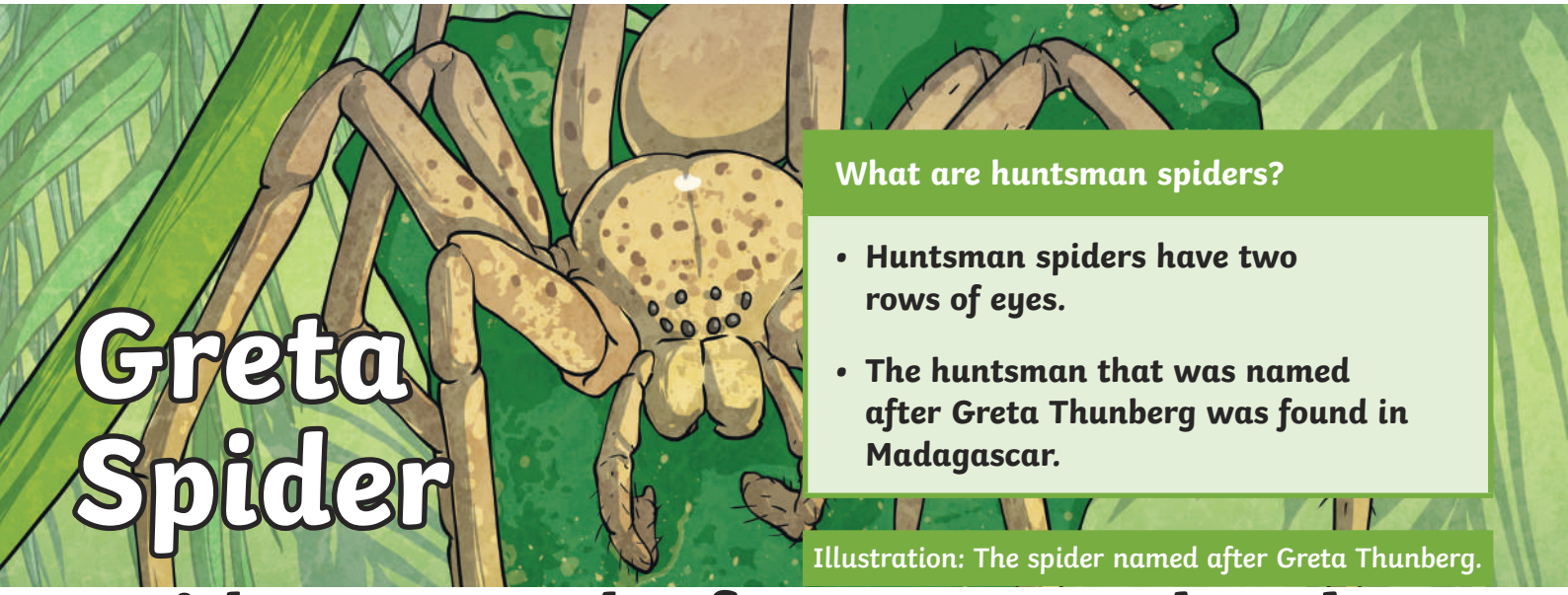
h	c	x	e	e	l	a	m	m	i	v	y
h	s	l	s	b	w	s	i	x	r	x	m
a	p	f	t	m	p	u	n	n	r	k	w
v	a	p	h	q	r	r	u	d	c	r	b
g	r	w	r	u	o	p	t	m	g	i	y
v	t	e	o	e	m	r	e	b	g	r	c
u	i	n	u	s	i	i	s	u	u	v	f
o	c	o	g	t	s	s	s	t	m	l	a
e	u	u	h	i	e	e	n	n	r	r	m
a	l	g	j	o	b	e	w	e	q	a	o
h	a	h	h	n	c	c	n	d	p	u	u
m	r	k	c	a	u	g	h	t	w	t	s

enough
through
caught
century
surprise
famous
particular
question
promise
minute

Y3/4 Spellings Words Search

f	g	w	r	b	e	l	i	e	v	e	e
o	j	r	e	x	g	a	a	f	f	d	e
r	w	y	a	c	r	z	e	g	g	r	i
w	c	e	r	t	a	i	n	b	h	f	g
a	k	p	l	b	m	s	a	n	j	t	h
r	u	l	y	n	m	w	u	g	k	g	t
d	e	j	j	m	a	e	g	h	y	h	x
b	c	e	n	t	r	e	h	j	r	l	n
d	j	f	w	k	o	d	t	u	y	b	r
s	u	d	h	j	p	c	y	y	n	n	a
c	q	a	p	p	e	a	r	d	d	s	q
d	i	f	f	e	r	e	n	t	v	b	j

certain
eight
naughty
believe
grammar
early
appear
different
centre
forward



What are huntsman spiders?

- **Huntsman spiders have two rows of eyes.**
- **The huntsman that was named after Greta Thunberg was found in Madagascar.**

Illustration: The spider named after Greta Thunberg.

Spider Named After Greta Thunberg

If you discovered a new animal, what would you call it? Well, Peter Jaeger, a spider expert from Germany, has named a new spider species after Greta Thunberg. It's the 400th time he's found a new type of spider!

The spider isn't the first animal to share Greta Thunberg's name. Other scientists have named a beetle and snail after her.

Greta isn't the first person or character to have their name given to an animal. In 2017, a monkey was named after Luke Skywalker, a character in the Star Wars movies!

So, who is Greta Thunberg? She is 17 and comes from Sweden. Greta was first in the news in 2018. Every Friday, she missed school to protest outside the Swedish parliament. She wanted people to do more about climate change.

She's been to other countries to talk about climate change, too. In August, Greta sailed across the Atlantic Ocean to the USA, to talk about climate change. Greta says she doesn't use aeroplanes to travel because of the pollution they cause. Afterwards, she had planned to travel down to Chile, in South America, but the meeting was changed and it happened in Spain. This meant that Greta then had to sail back across the Atlantic Ocean so she could go to the meeting.

Her actions inspired Peter Jaeger to name the spider after Greta. He said he did it because of her "commitment for a better future on our planet". Who knows if other animals will be named after her as well?

Glossary

species	Animals that are similar and can produce young.
parliament	The place where laws are talked about and passed.
climate change	The way in which the world's temperature is rising.
commitment	Making a big effort to do something.

Questions

1. Draw a line to match the country to the information in the story.

Greta comes from...	Germany
Peter Jaeger comes from...	Madagascar
The spider was found in...	the USA
Greta sailed to...	Sweden

2. Fill in the gap to the complete this sentence from the story.

   It's the _____ time he's found a new type of spider.

3. 'Her actions inspired Peter Jaeger.'
   Tick the word that is closest in meaning to 'inspired'.

   - ○ annoyed
   - ○ impressed
   - ○ surprised
   - ○ saddened

4. Why do you think scientists name animals after famous people? Explain your answer.

   _____

   _____

5. Do you think Greta was right to miss school to protest? Explain why you think this.

   _____

   _____

6. Write a summary of the story in 20 words or fewer.

   _____

   _____

   _____

Word Search
4 Times Table

Answer the calculations below and find the answers in the word search:

4 x 3 =
4 x 4 =
4 x 11 =
4 x 8 =
4 x 10 =
4 x 2 =

f	t	h	i	r	t	y	t	w	o
t	o	h	f	o	r	t	y	w	o
w	t	r	s	i	x	e	e	t	e
e	w	r	t	e	s	e	s	h	i
l	s	e	l	y	n	l	h	i	g
v	k	i	e	t	f	e	e	r	h
e	a	e	y	e	a	o	t	t	t
f	o	r	t	e	o	o	u	y	e
o	n	n	e	e	t	h	g	r	e
s	i	x	t	e	e	n	b	n	n

Word Search
3 Times Table

Answer the calculations below and find the answers in the word search:

3 x 3 =
3 x 4 =
3 x 10 =
3 x 6 =
3 x 2 =
3 x 7 =

e	t	h	i	r	t	y	n	e	l
t	n	h	x	t	t	e	r	t	o
w	i	u	e	d	b	i	w	n	e
e	n	r	w	e	s	e	e	o	s
l	e	e	l	p	n	e	h	u	i
v	k	e	e	t	t	i	e	r	x
e	a	e	y	h	a	u	t	n	e
m	q	o	g	e	o	o	k	i	e
o	n	i	e	e	t	h	g	n	e
e	e	d	j	p	z	o	b	n	n

Word Search
8 Times Table

Answer the calculations below and find the answers in the word search:

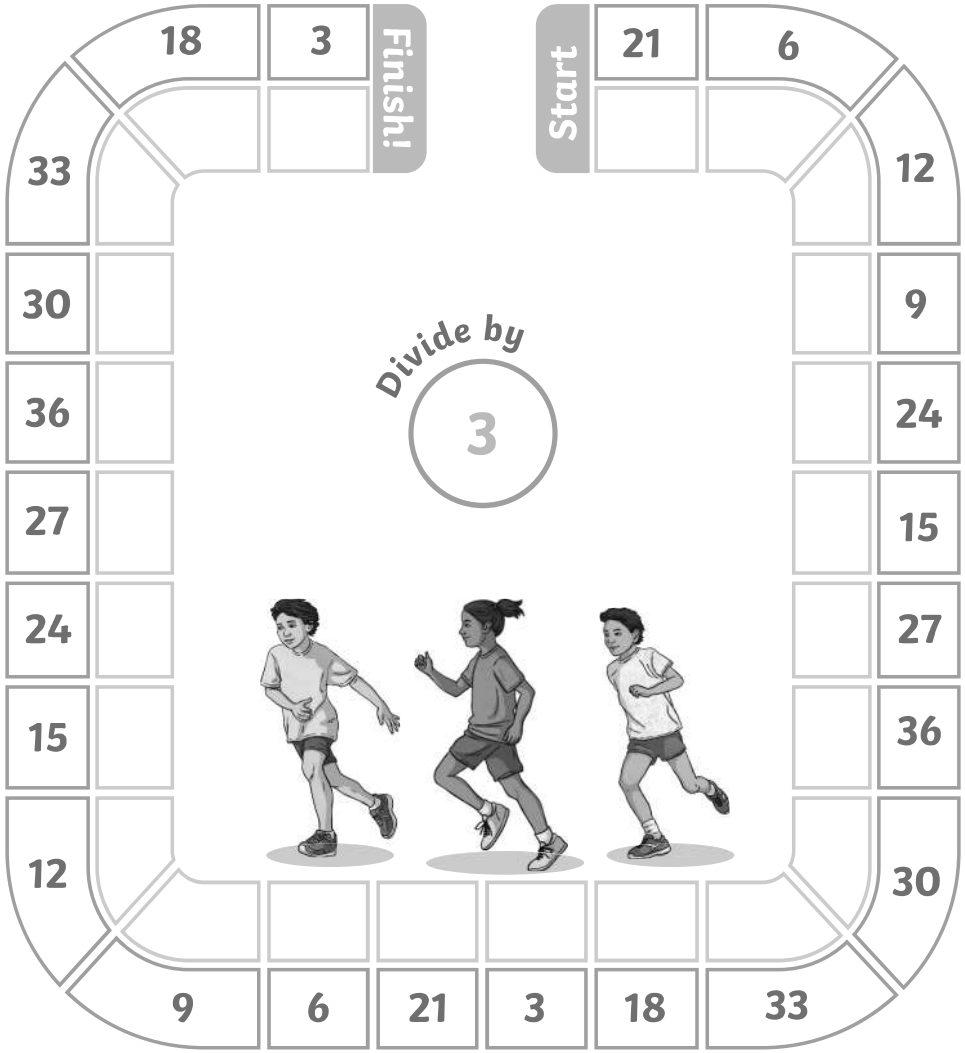
5 x 8 =
8 x 7 =
8 x 3 =

4 x 8 =
8 x 10 =
8 x 2 =

t	o	e	v	e	n	e	y	i	e
h	w	h	t	w	e	i	v	e	f
i	t	e	e	d	b	g	n	o	i
r	y	e	n	e	s	h	r	h	f
t	t	e	e	t	y	t	e	i	t
y	r	i	r	t	y	y	e	r	y
t	i	y	t	r	o	f	t	t	s
w	h	e	w	u	o	u	o	y	i
o	t	o	o	e	t	e	o	u	x
e	s	i	x	t	e	e	n	n	r

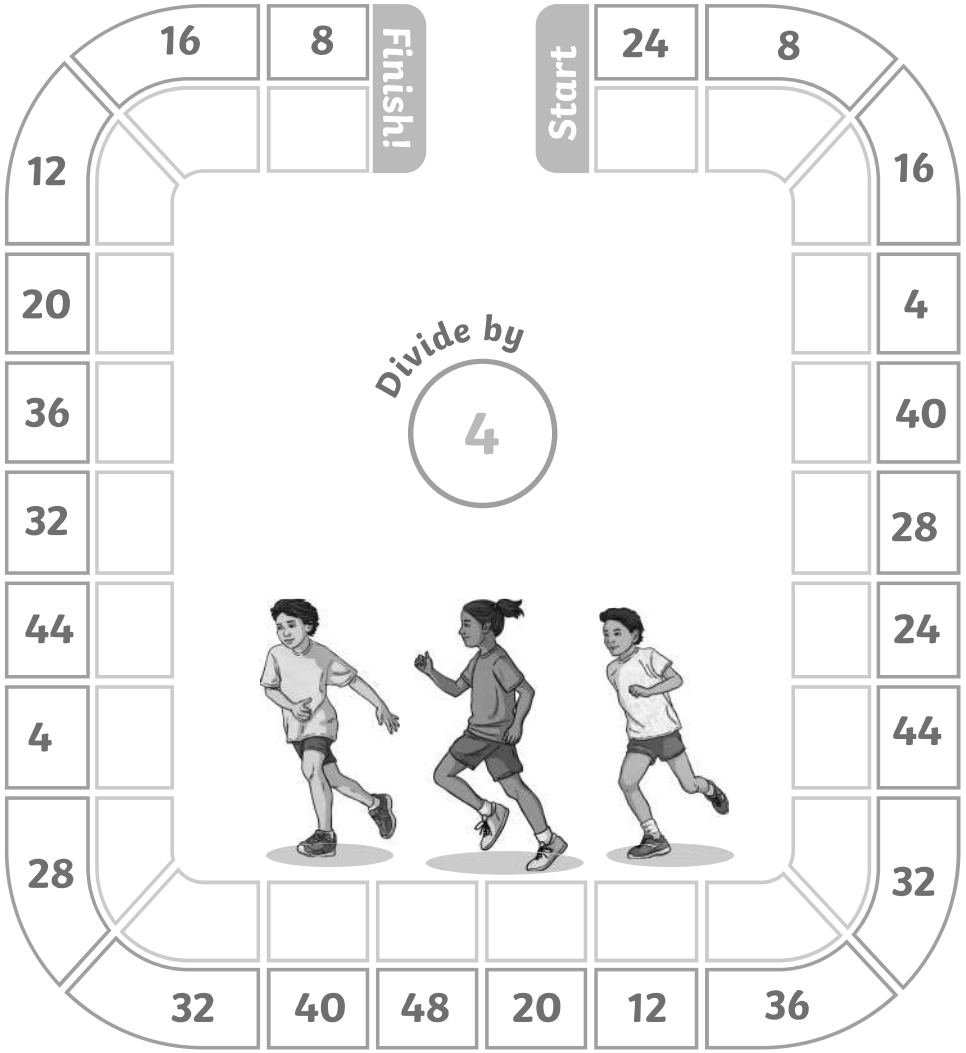
Division by 3 Race

Take the number in the circle below and divide the numbers outside of the track by it. Write your answers as you go and see how long it takes you to finish the race!



Division by 4 Race

Take the number in the circle below and divide the numbers outside of the track by it. Write your answers as you go and see how long it takes you to finish the race!



Division by 8 Race

Take the number in the circle below and divide the numbers outside of the track by it. Write your answers as you go and see how long it takes you to finish the race!

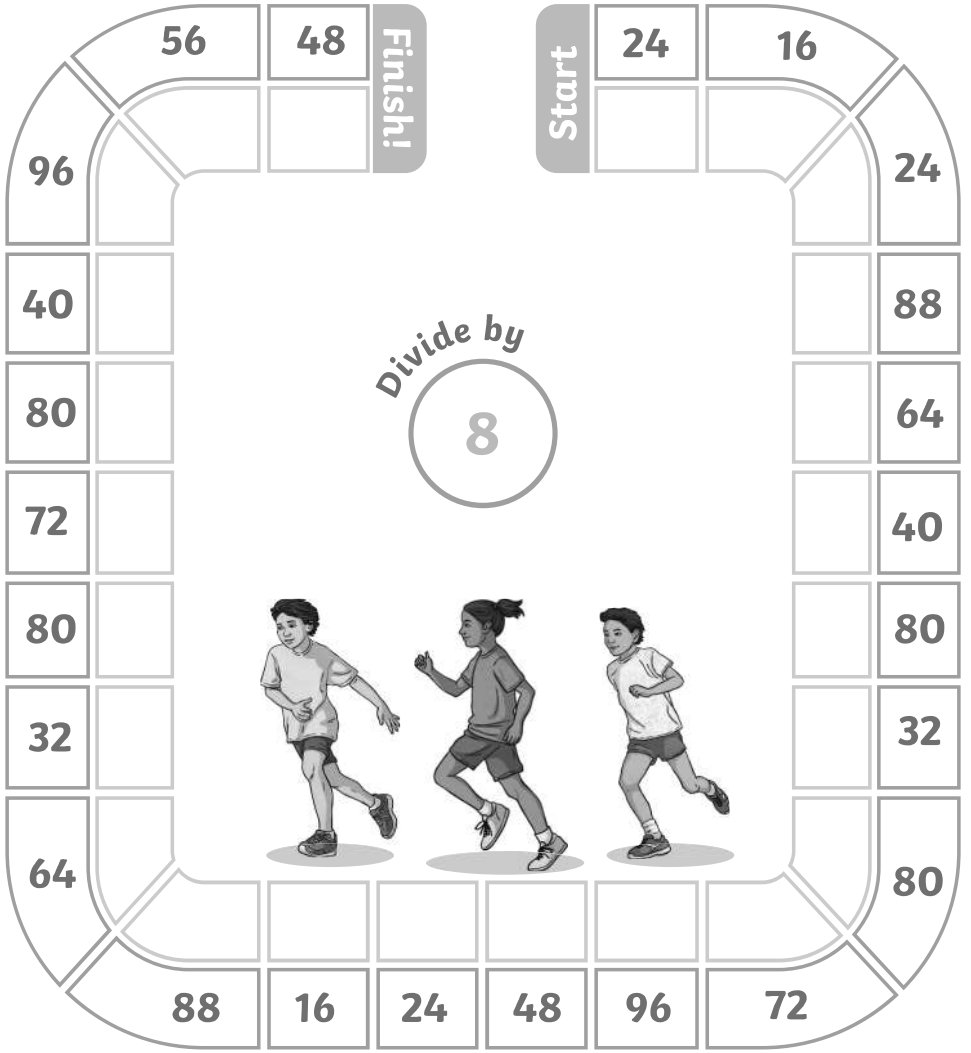


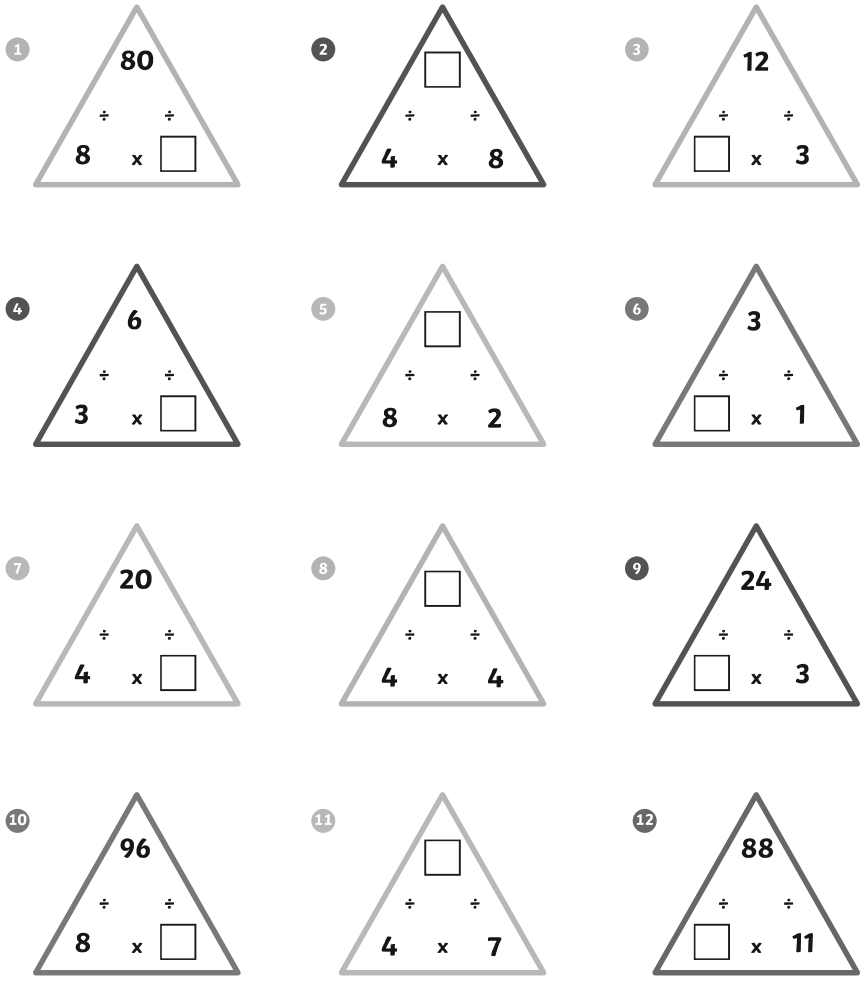
Table at the Double

Find the 2x table by doubling each number. Find the 4x table by doubling the 2x table. Find the 8 times table by doubling the 4x table. Can you complete the whole sheet?

Number	x2	x4	x8
2	4	8	16
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
15			
20			
50			
100			

Multiplication Triangles Sheet 1

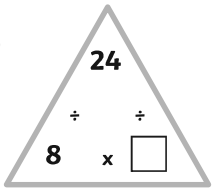
Fill in the blanks in these multiplication triangles.



Multiplication Triangles Sheet 2

Fill in the blanks in these multiplication triangles.

13



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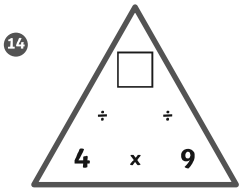

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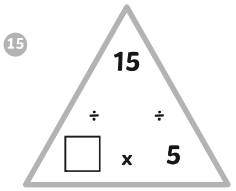

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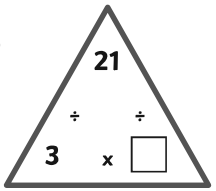

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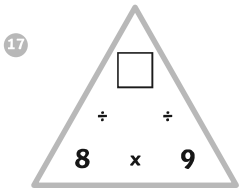

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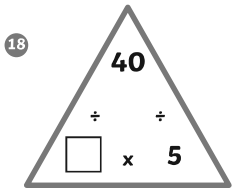

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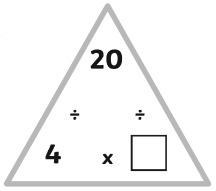

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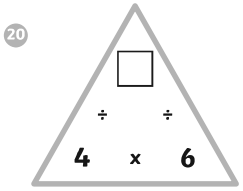

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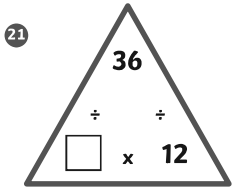

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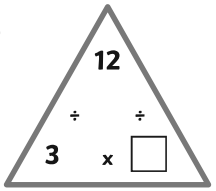

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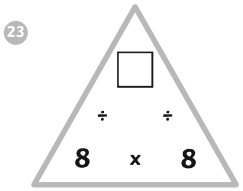

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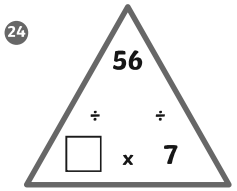


Mental Multiplication

Try using these mental calculation strategies to see how many of these calculations you can perform mentally.

x4

Double the number and then double it again.

e.g. 13 x 4 = 52
(13 x 2 = 26,
26 x 2 = 52)

x5

Double the number by 10 an then half it.

e.g. 14 x 5 = 70
(14 x 10 = 140,
140 ÷ 2 = 70)

x8

Double the number, double it again and then double it a third time.

e.g. 13 x 8 = 104
(13 x 2 = 26, 26 x 2 = 52,
52 x 2 = 104)

x9

Multiply the number by 10 and then subtract the number.

e.g. 15 x 9 = 135
(15 x 10 = 150,
150 - 15 = 135)

x11

Multiply the number by 10 and then add the number.

e.g. 7 x 11 = 77
(7 x 10 = 70,
7 + 7 =77)

x15

Multiply the number by 10 and thena add half of the total.

e.g. 12 x 15 = 180
(12 x 10 = 120,
120 ÷ 2 = 60, 60 + 120 = 180)

1. 14 x 4 =
2. 13 x 5 =
3. 6 x 8 =
4. 8 x 9 =
5. 9 x 11 =
6. 6 x 15 =
7. 15 x 4 =
8. 9 x 5 =
9. 12 x 8 =
10. 13 x 9 =
11. 10 x 11 =
12. 12 x 15 =
13. 15 x 4 =
14. 20 x 5 =
15. 5 x 8 =
16. 12 x 9 =
17. 13 x 11 =
18. 8 x 15 =
19. 4 x 8 =
20. 9 x 15 =
21. 11 x 15 =
22. 14 x 8 =

Multiplying 2-digit Numbers by 1-digit Numbers Using the Grid Method

1

x	10	3
9		

2

x	70	1
5		

3

x	50	6
5		

4

x	20	3
3		

5

x	80	9
9		

6

x	60	3
7		

7

x	70	5
7		

8

x	10	3
5		

9

x	20	8
9		

10

x	50	3
8		

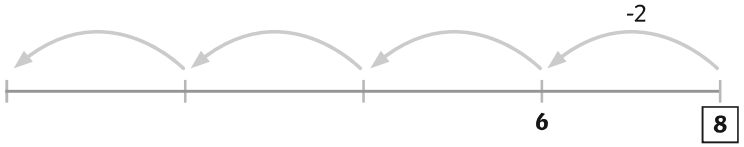
New Bus Stop Method Formal Division of 2-digit Numbers

LO: I can use a formal method of division.

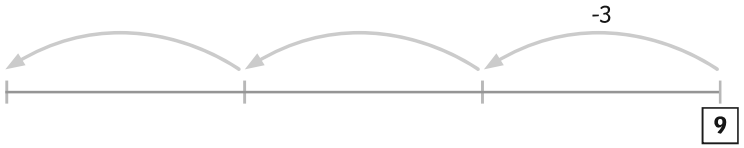
1. 69 ÷ 3 =
2. 88 ÷ 4 =
3. 90 ÷ 5 =
4. 76 ÷ 4 =
5. 72 ÷ 3 =
6. 70 ÷ 5 =
7. 24 ÷ 2 =
8. 56 ÷ 4 =
9. 36 ÷ 3 =
10. 65 ÷ 5 =
11. 96 ÷ 4 =
12. 90 ÷ 6 =
13. 96 ÷ 8 =
14. 96 ÷ 6 =
15. 88 ÷ 8 =
16. 80 ÷ 4 =
17. 95 ÷ 5 =
18. 92 ÷ 4 =
19. 46 ÷ 2 =
20. 78 ÷ 6 =
21. 92 ÷ 4 =
22. 84 ÷ 4 =
23. 72 ÷ 3 =
24. 70 ÷ 7 =
25. 88 ÷ 4 =
26. 80 ÷ 5 =
27. 98 ÷ 7 =
28. 66 ÷ 3 =
29. 84 ÷ 4 =
30. 91 ÷ 7 =

Division using a Numberline

1. 8 ÷ 2 =



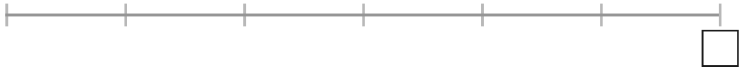
2. 9 ÷ 3 =



3. 12 ÷ 4 =

4. 12 ÷ 3 =

5. 18 ÷ 3 =

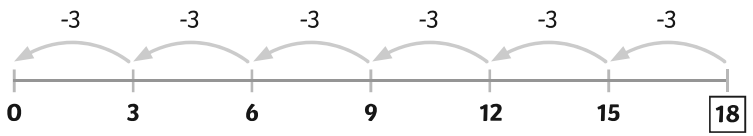


6. 18 ÷ 6 =

7. 36 ÷ 3 =

8. 48 ÷ 4 =

9. 18 ÷ 3 = 6



10. 18 ÷ 6 =

11. 28 ÷ 7 =

12. 32 ÷ 8 =

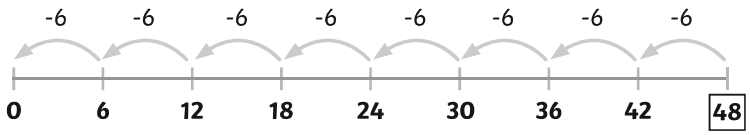
13. 42 ÷ 3 =

14. 32 ÷ 4 =

15. 52 ÷ 4 =

16. 70 ÷ 5 =

17 **48 ÷ 6 = 8**



18 **54 ÷ 6 =** ☐

19 **96 ÷ 8 =** ☐

20 **88 ÷ 8 =** ☐

21 **88 ÷ 4 =** ☐

22 **64 ÷ 8 =** ☐

23 **91 ÷ 7 =** ☐

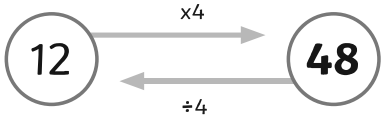
24 **108 ÷ 9 =** ☐

I'm Thinking of a Number

Use the inverse operation to work backwards and find the original number.

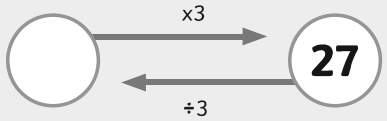
Example:

Samiya is thinking of a number. She multiplies it bt 4 and her new number is 48. What number was she first thinking of?

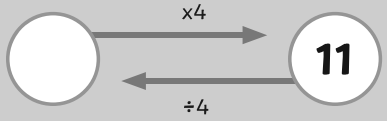


Questions:

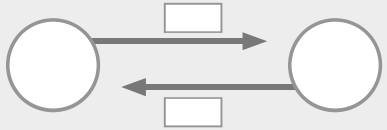
1. Nat is thinking of a number. He multiplies it by 3 and his new number is 27. What number was he first thinking of?



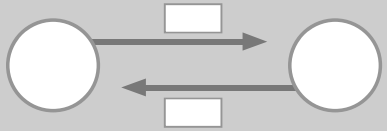
2. Shahid is thinking of a number. He divides it by 4 and his new number is 11. What number was he first thinking of?



3. Esme is thinking of a number. She divides it by 8 and her new number is 5. What number was she first thinking of?



4. Taylor is thinking of a number. He multiplies it by 3 and his new number is 24. What number was he first thinking of?



5. Levi is thinking of a number. He multiplies it by 8 and his answer is 32. What number was he first thinking of?

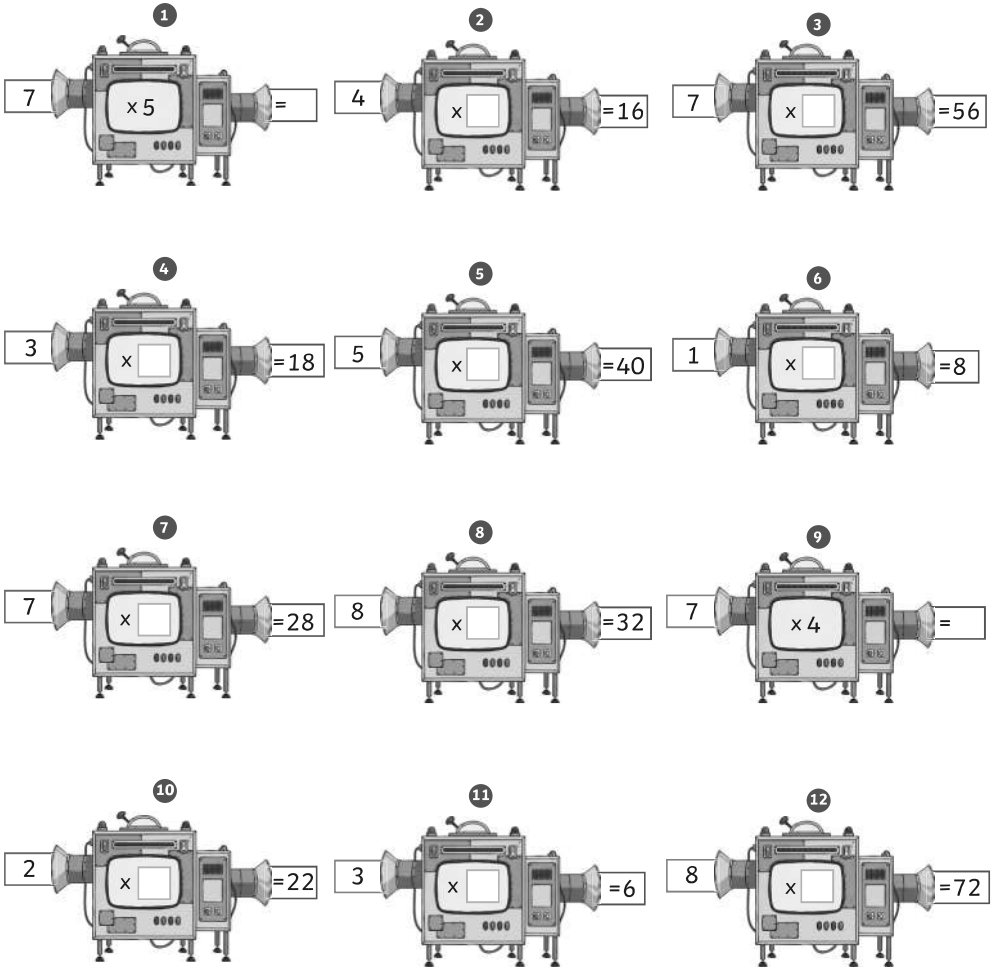
6. Vivi is thinking of a number. She multiplies it by 3 and her new number is 12. What number was she first thinking of?

Deriving Related Multiplication Facts From Known Multiplication Tables

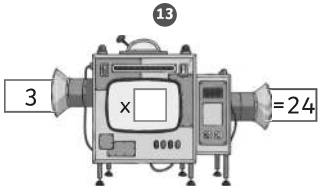
Complete the times tables question on the small lorries then use the answers to complete the associated facts on the big lorries!

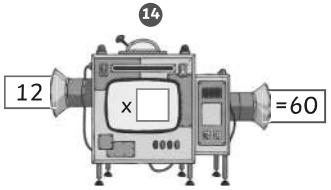
1	3 x 4 =	3 x 40 =	4 x 30 =	4 x 3 =
2	3 x 6 =	3 x 60 =	6 x 30 =	6 x 3 =
3	3 x 7 =	3 x 70 =	7 x 30 =	7 x 3 =
4	4 x 4 =	4 x 40 =	40 x 4 =	4 x 4 =
5	4 x 7 =	40 x 7 =	7 x 40 =	7 x 4 =
6	3 x 8 =	3 x 80 =	8 x 30 =	
7	4 x 9 =	4 x 90 =		
8	8 x 5 =			
9	8 x 9 =			
10	8 x 6 =			

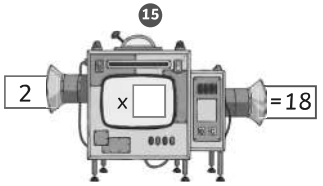
Multiplication Missing Numbers

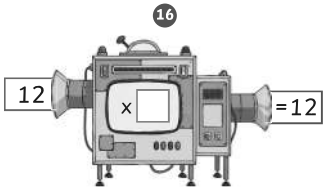


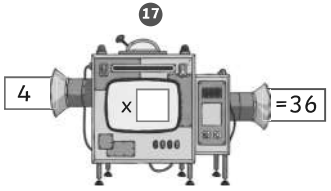
Multiplication Missing Numbers

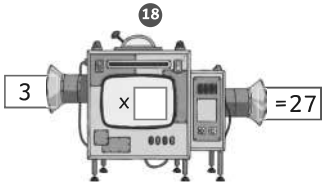
13. 

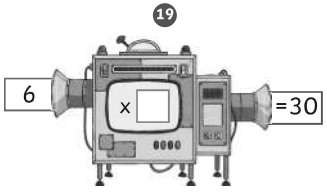
14. 

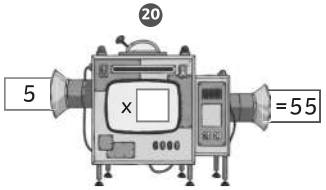
15. 

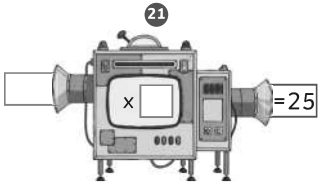
16. 

17. 

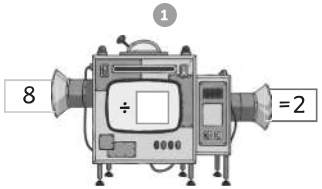
18. 

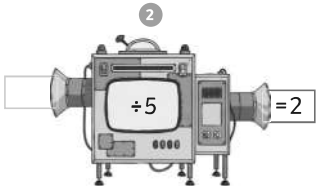
19. 

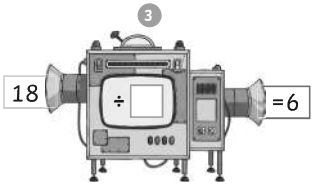
20. 

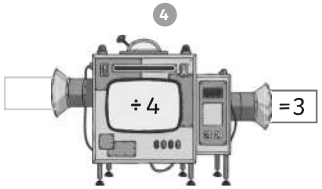
21. 

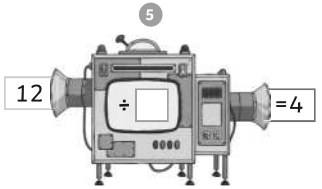
Division Missing Numbers

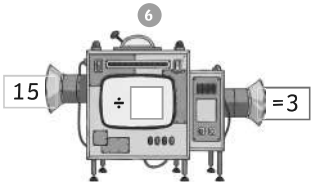
1. 

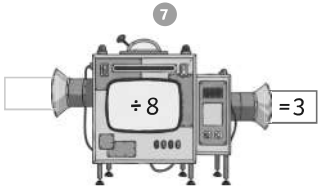
2. 

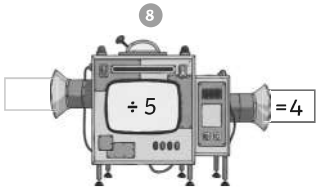
3. 

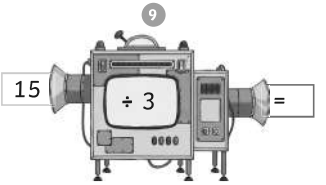
4. 

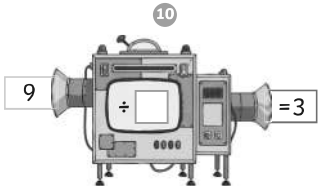
5. 

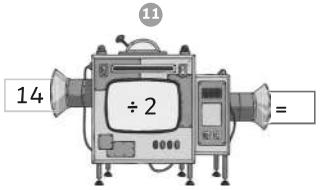
6. 

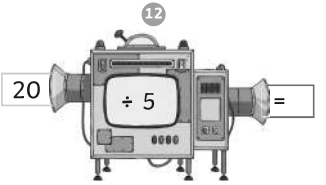
7. 

8. 

9. 

10. 

11. 

12. 

Division Missing Numbers

13 27 ÷ □ = 9

14 18 ÷ □ = 9

15 □ ÷ 4 = 7

16 48 ÷ □ = 12

17 40 ÷ 5 = □

18 □ ÷ 2 = 11

19 30 ÷ □ = 15

20 □ ÷ 11 = 3

21 21 ÷ □ = 7

Scaling Problems

1 There are three biscuits in a packet. How many are there in seven packets?

2 There are six stickers in a pack, how many packs do you need to buy to have 30 stickers?

3 I have eight 5p coins in my money box. How much money do I have?

4 Joe builds a tower which is five bricks tall. Gina builds one four times as high. How many bricks does Gina use?

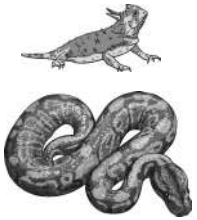
Scaling Problems

5 There are six eggs in a box - how man boxes are needed to make 48 eggs?

6 Danyal has a 5p coin, a 2p coin and a 1p coin. Dylan has three times as much. How much does Dylan have?

7 Lisa has four cubes. Ned has double the number of cubes Lisa has. Mina has double the number of cubes that Ned has. How many cubes does everyone have?

8 A lizard is four centimetres long. A snake is nine times as long. How long is the snake?



Colour the Division Equation

Can you colour all the lines of three number squares that make a division equation? The line can be in any order but squares must be beside eachother in a column or in a row. Squares can be part of more than one equation.

The example is 15 ÷ 3 = 5 is shown below.

1

15	6	8	60	5	12	1	12
5	1	5	7	16	4	23	12
3	21	4	9	7	3	1	1
8	3	20	10	2	17	16	1
4	1	1	5	3	16	2	8
32	18	9	2	2	4	7	2
25	3	15	3	4	4	4	16
18	6	1	6	9	13	9	14

2

88	10	31	1	41	21	6	27
8	25	23	4	4	7	9	9
11	1	11	9	21	3	9	3
3	15	5	2	10	12	14	24
33	3	55	3	4	4	16	8
4	44	11	2	40	8	5	15
7	8	13	2	5	2	10	20
28	4	7	8	8	4	2	2

3

24	12	2	1	3	7	14	35
21	17	4	9	8	10	2	5
19	20	8	4	32	2	7	7
6	10	2	20	11	5	5	25
5	5	4	5	15	3	1	3
4	2	3	6	2	36	5	2
4	18	9	10	13	12	2	6
16	16	3	27	9	14	12	15

4

14	18	20	2	10	2	15	6
7	17	4	9	8	4	32	23
2	10	5	22	80	14	8	16
11	9	3	9	28	7	4	10
7	90	15	13	8	35	19	24
25	4	2	15	3	5	6	30
21	12	4	5	12	20	20	10
48	6	8	12	4	4	16	3

Weekly Writing Challenge

This week, you are going to plan and write a short story. The idea for your story is **'The Suitcase'.**

Imagine you find an old suitcase in a dusty attic. Describe the things that you find inside.

Things to think about:

- How old are the objects?
- What do the objects look like?
- Who do you think the suitcase may have belonged to?
- What are you going to do with the suitcase and the contents?
- What type of story will this be? Mystery? Adventure? Scary? Science fiction?

Remember to:

- Plan your story with a beginning, middle and end. How are you going to hook the reader at the start? Create a storyboard to tell your story.
- Organise your ideas into paragraphs.
- Choose your words carefully to entertain the reader.
- Write in sentences. Try to think of really good descriptive words to use.
- Pay attention to your spelling and punctuation.
- Read, check and edit your work carefully.
- Decide how you are going to publish your story: writing it out, typing it, making a book?

The Suitcase

1.

2.

3.

4.

5.

6.

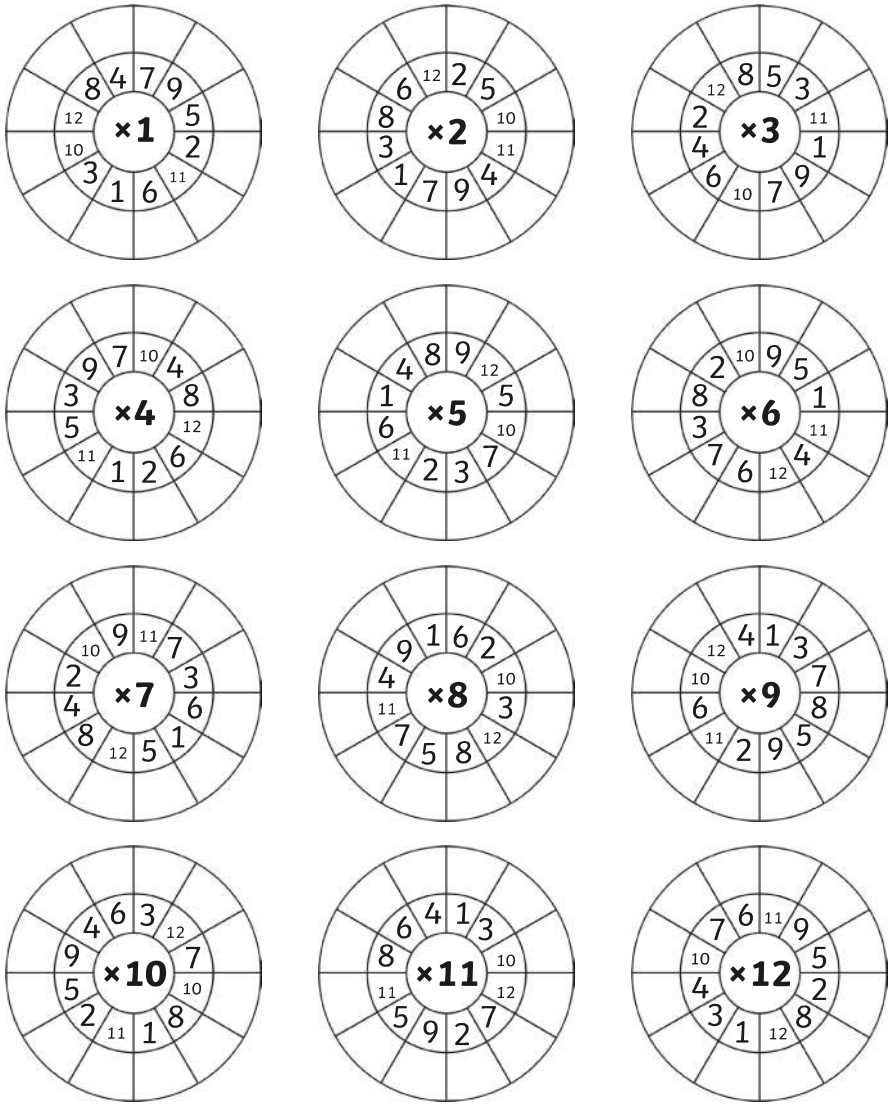
7.

8.


VENEZIA

Multiplication Wheels

Multiply the numbers by the middle number.



Multiplying Three Numbers

1. 2 × 1 × 2 =		2. 3 × 2 × 3 =	
3. 3 × 0 × 3 =		4. 4 × 3 × 2 =	
5. 4 × 3 × 4 =		6. 5 × 4 × 5 =	
7. 2 × 8 × 2 =		8. 2 × 7 × 4 =	
9. 5 × 2 × 4 =		10. 1 × 3 × 9 =	
11. 2 × 4 × 8 =		12. 2 × 3 × 9 =	
13. 9 × 2 × 5 =		14. 2 × 2 × 9 =	
15. 4 × 4 × 4 =		16. 3 × 3 × 3 =	
17. 6 × 2 × 6 =		18. 7 × 1 × 2 =	
19. 4 × 2 × 8 =		20. 10 × 2 × 3 =	

Multiplying by 1 and 0 and Dividing by 1

A. Calculate:

1. 12 x 1 =

2. 1 x 82 =

3. 0 x 1 =

4. 25 x 1 =

5. 342 x 1 =

6. 212 ÷ 1 =

7. 4567 x 0 =

8. 1 x 1 =

9. 0 x 11 =

10. 1 x 31 =

11. 0 x 0 =

12. 0 ÷ 1 =

13. 50 x 1 =

14. 1 x 50 =

15. 1 x 3983 =

16. 26 ÷ 1 =

17. 1 ÷ 1 =

18. 156 x 0 =

B. Write the calculation represented by these word problems then solve the word problem.

1. Dave buys 72 eggs and puts them all in one basket. How many eggs are in the basket?

Calculation = Answer =

2. Bobbie finds a shop selling games consoles for £79. She buys one game console. How much does she spend?

Calculation = Answer =

3. Samit's dad earns £65 per shift, but last week he could not work as he was ill. How much did he earn altogether last week?

Calculation = Answer =

C. Work your way across each grid applying each operation to the answer from the previous calculation.

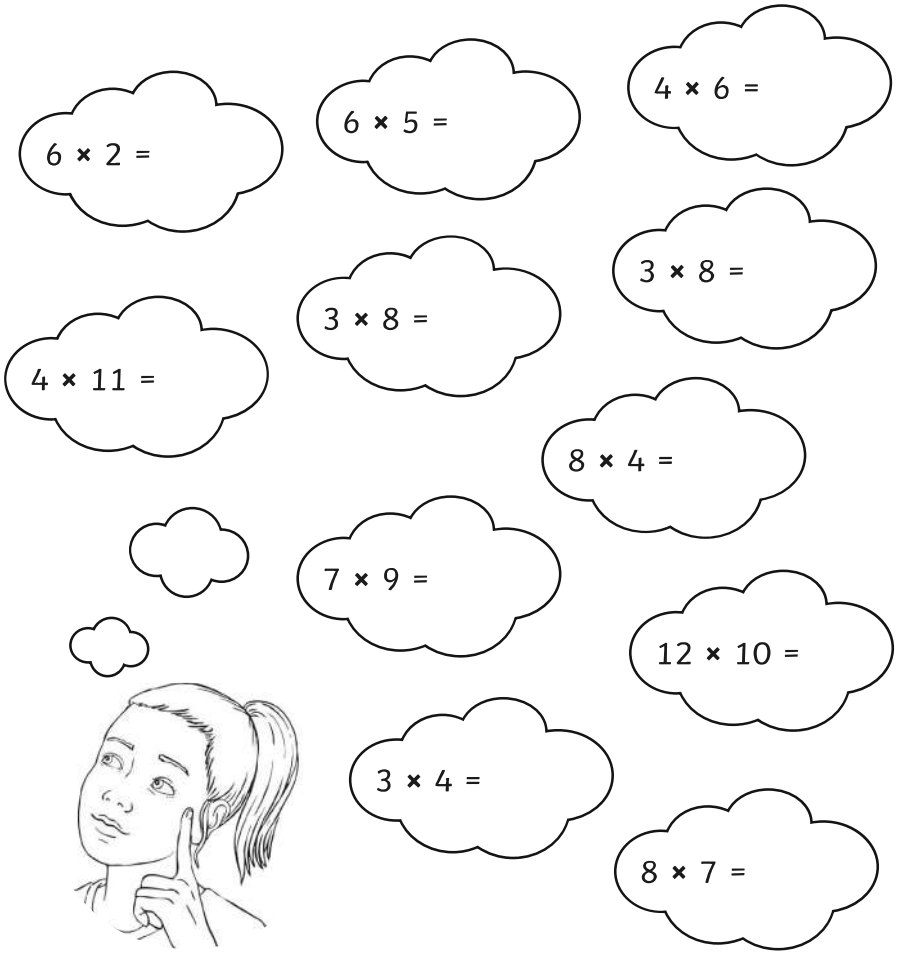
Beginning Number	÷1	x1	x0	÷1	Ending Number
32					

Beginning Number	÷1	x1	x1	x0	Ending Number
1					

Beginning Number	x1	÷1	x1	÷1	Ending Number
10 000					

Multiplying Mentally Using Known Facts

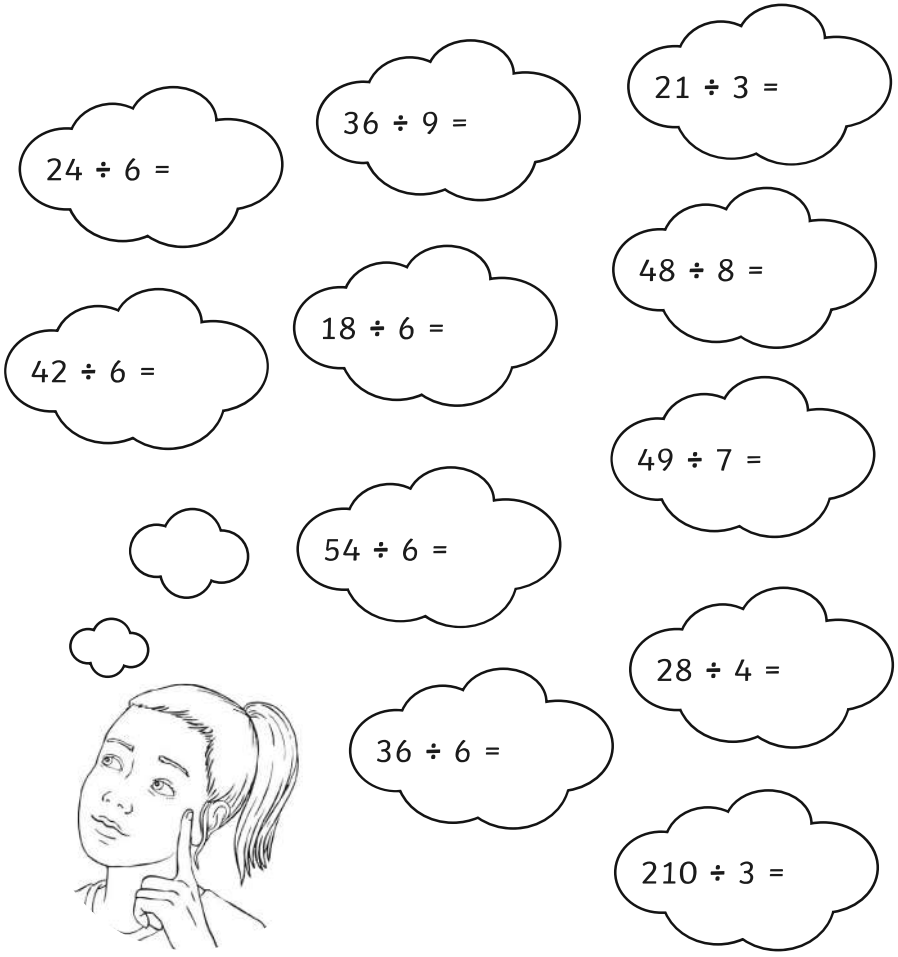
Start this activity by recording the answers to these multiplication questions.



6 × 20 =	40 × 11 =	6 × 50 =	40 × 6 =	3 × 80 =
80 × 4 =	7 × 90 =	120 × 10 =	3 × 40 =	80 × 7 =
600 × 2 =	4 × 1100 =	600 × 5 =	4 × 600 =	300 × 8 =
8 × 400 =	700 × 9 =	12 × 1000 =	300 × 4 =	8 × 700 =
60 × 20 =	40 × 110 =	60 × 50 =	40 × 60 =	30 × 80 =
80 × 40 =	70 × 90 =	120 × 100 =	30 × 40 =	80 × 70 =

Dividing Mentally Using Known Facts

Start this activity by recording the answers to these division questions.



The Commutative Law of Multiplication

Write the order in which you think it is best to multiply these numbers and then work out the calculation.
Tip: you may not need to change every calculation.

Example: 4 × 17 = 17 × 4 = 68

17 × 4 = ____ × ____ = ____	4 × 29 = ____ × ____ = ____
3 × 24 = ____ × ____ = ____	28 × 8 = ____ × ____ = ____
5 × 17 = ____ × ____ = ____	7 × 17 = ____ × ____ = ____
29 × 6 = ____ × ____ = ____	15 × 8 = ____ × ____ = ____
4 × 18 = ____ × ____ = ____	5 × 27 = ____ × ____ = ____
7 × 11 = ____ × ____ = ____	3 × 24 = ____ × ____ = ____
19 × 3 = ____ × ____ = ____	17 × 3 = ____ × ____ = ____
7 × 30 = ____ × ____ = ____	4 × 14 = ____ × ____ = ____
8 × 21 = ____ × ____ = ____	6 × 24 = ____ × ____ = ____
3 × 18 = ____ × ____ = ____	21 × 5 = ____ × ____ = ____
28 × 9 = ____ × ____ = ____	8 × 26 = ____ × ____ = ____
2 × 15 = ____ × ____ = ____	9 × 24 = ____ × ____ = ____
12 × 4 = ____ × ____ = ____	7 × 29 = ____ × ____ = ____
29 × 5 = ____ × ____ = ____	27 × 6 = ____ × ____ = ____
7 × 27 = ____ × ____ = ____	5 × 17 = ____ × ____ = ____

Using Commutativity in Mental Calculations

Look at the following questions. Decide if you can use the principle of commutativity (doing the multiplication in any order) to make the calculations easier to answer. If you can't make them any easier, just change the order anyway!

e.g. 2 × 9 × 5 =	Five multiplied by two equals ten – doing that first makes any subsequent calculation easy! 5 × 2 × 9 = 10 × 9 = 90
e.g 9 × 2 × 8 =	9 x 8 is from a multiplication table you may already know. You can finish the calculation by just doubling the answer. 9 × 8 × 2 = 72 × 2 = 144

1. 12 × 2 × 5 =	
2. 2 × 13 × 2 =	
3. 5 × 10 × 4 =	
4. 5 × 5 × 2 =	
5. 5 × 4 × 5 =	
6. 12 × 5 × 10 =	
7. 14 × 5 × 2 =	
8. 7 × 13 × 0 =	
9. 2 × 2 × 11 × 2 =	
10. 10 × 136 × 10 =	
11. 1 × 2 × 3 × 4 × 5 =	

Multiplying Two-Digit Numbers by One-Digit Numbers Answers

1. 24 × 4	2. 22 × 5	3. 18 × 5	4. 26 × 3
5. 12 × 5	6. 48 × 2	7. 41 × 9	8. 31 × 7
9. 44 × 7	10. 32 × 7	11. 62 × 3	12. 66 × 4
13. 82 × 4	14. 87 × 8	15. 94 × 8	16. 53 × 8
17. 85 × 4	18. 75 × 3	19. 68 × 6	20. 78 × 7

Three Digit × One Digit Multiplication

Answer these calculations using either the compact method or the long multiplication method:

1. 167 x 3	**2.** 137 x 3
3. 261 x 4	**4.** 319 x 3
5. 629 x 5	**6.** 417 x 6
7. 130 x 9	**8.** 617 x 9
9. 243 x 4	

Missing Numbers 2-Digit × 1-Digit Multiplication

Calculate the missing digits in these calculations.

1. $\square 8 \times \square = 272$

2. $8\square \times 4 = 324$

3. $\square 4 \times \square = 84$

4. $\square 1 \times \square = 205$

5. $3\square \times 3 = 90$

6. $\square 7 \times \square = 485$

7. $2\square \times 2 = 44$

8. $2\square \times 4 = 108$

9. $\square 0 \times \square = 200$

10. $\square 1 \times \square = 33$

11. $6\square \times 4 = 244$

12. $3\square \times 2 = 72$

13. $2\square \times 5 = 110$

14. $9\square \times 3 = 273$

15. $8\square \times 3 = 267$

16. $\square 0 \times \square = 40$

17. $\square 4 \times \square = 336$

18. $5\square \times 2 = 110$

19. $9\square \times 5 = 460$

20. $\square 3 \times \square = 372$

21. $1\square \times 3 = 36$

22. $\square 8 \times \square = 294$

23. $2\square \times 4 = 96$

24. $1\square \times 3 = 33$

25. □9 × □ = 1 1 8

26. □2 × □ = 7 2

27. □1 × □ = 1 5 5

28. 4□ × 3 = 1 4 1

29. 5□ × 3 = 1 7 4

30. □3 × □ = 4 1 5

Multiplying 3-Digit by 1-Digit Numbers

Calculate the missing number in these calculations.

1. 2_4 × _ = 856
2. _0_ × 4 = 1204
3. 8_5 × _ = 4950
4. 6_6 × _ = 3280
5. _4_ × 3 = 1620
6. 9_8 × _ = 4890
7. _1_ × 2 = 432
8. _0_ × 4 = 836
9. 9_6 × _ = 3864
10. 3_5 × 3 = 1035
11. _4_ × 4 = 584
12. _3_ × 2 = 1876
13. _7_ × 5 = 3380
14. _7_ × 3 = 834
15. _5_ × 3 = 477
16. 8_6 × _ = 3384
17. 5_6 × _ = 2144
18. _6_ × 2 = 730

19. _7_ × 5 = 1355

20. 8_4 × _ = 3336

21. _5_ × 3 = 1056

22. 7_2 × _ = 2226

23. _8_ × 4 = 740

24. _0_ × 3 = 1200

25. 1_9 × _ = 338

26. _7_ × 6 = 3456

27. 1_6 × _ = 680

28. 4_2 × _ = 1446

29. _0_ × 3 = 1518

30. 4_1 × _ = 2055

31. _4_ × 6 = 4494

32. _4_ × 2 = 292

33. 8_2 × _ = 1644

34. 6_3 × _ = 1346

35. _0_ × 5 = 4535

36. _2_ × 2 = 258

37. _8_ × 2 = 1766

38. _6_ × 4 = 3444

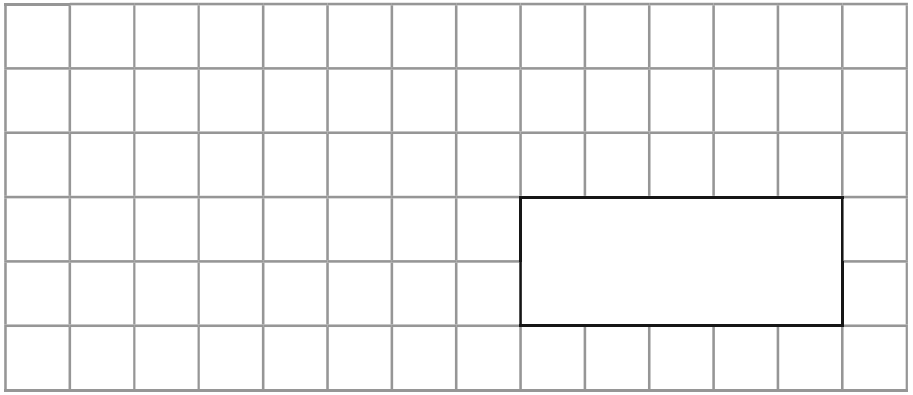
39. _5_ × 6 = 5124

40. 6_5 × _ = 3225

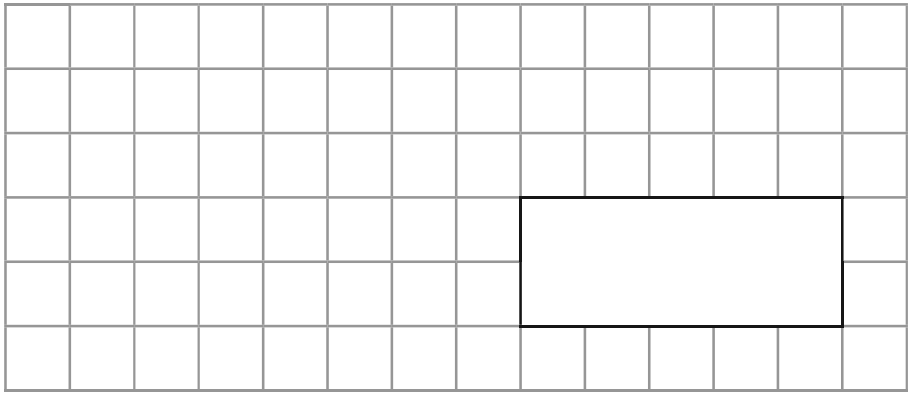
Problems Involving Scaling Worksheet

Scale the information you have been given up or down to find the answer to each question.

1. Eggs cost 90p for 6. How much would 36 eggs cost?

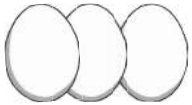


2. The length of a toy car is 3cm. Tony wants to make a drawing which is 17 times bigger. How long will the car be in his drawing?

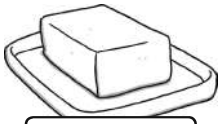


Robyn is using a recipe which requires these ingredients to make chocolate brownies – she wants to sell them at a fayre.

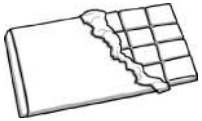
Plain flour **90g**



3 large eggs



Butter **200g**



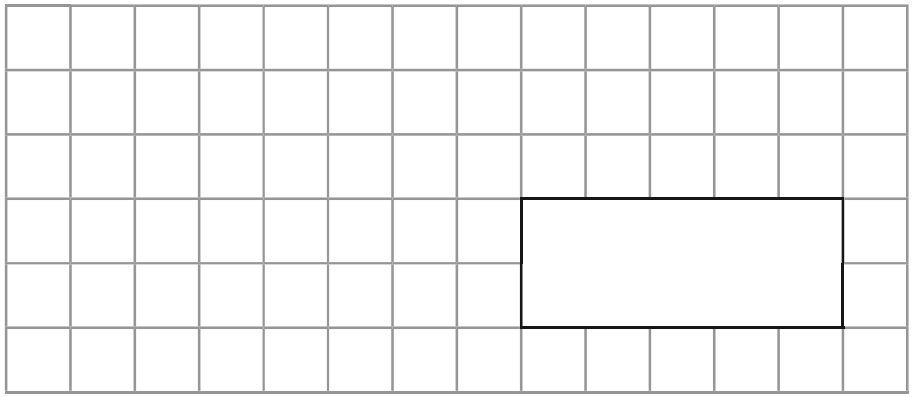
Chocolate **250g**

Cocoa powder **50g**

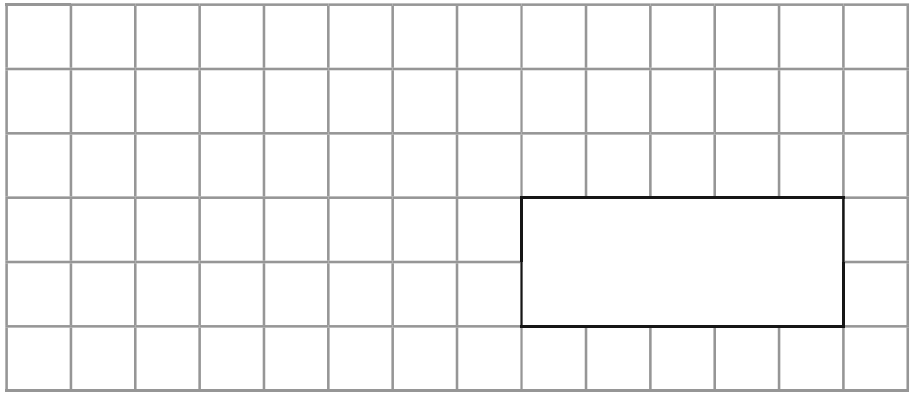
Sugar **300g**

All of the ingredients above will make 16 squares. Use this information to help answer the questions on the next page.

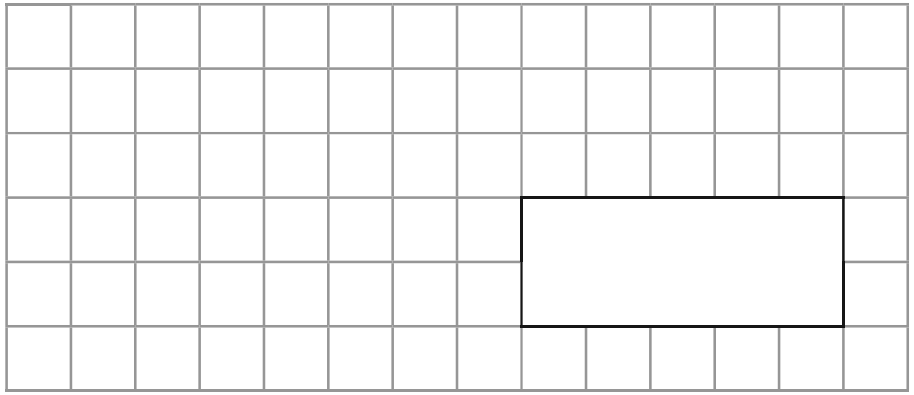
3. How much cocoa powder will she need to make 64 squares?



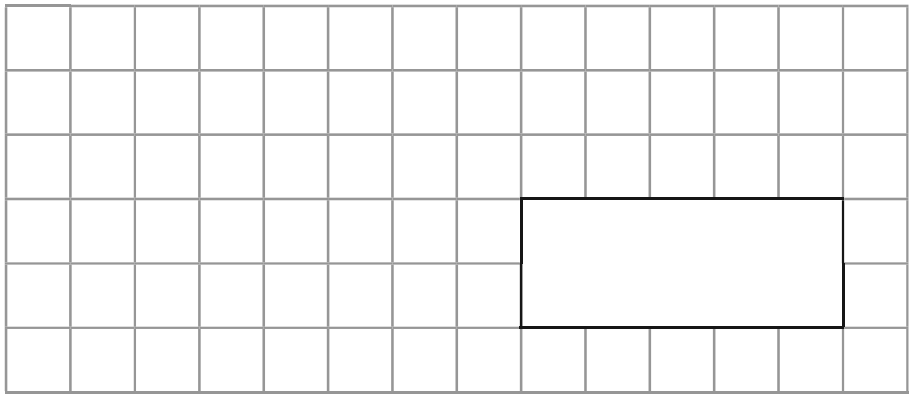
4. How many squares can she make with nine eggs?



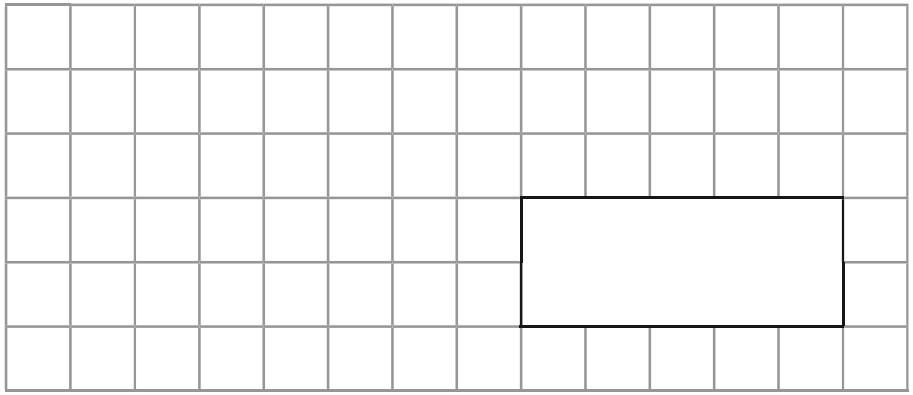
5. How many squares can the recipe make if she uses 1kg of butter?



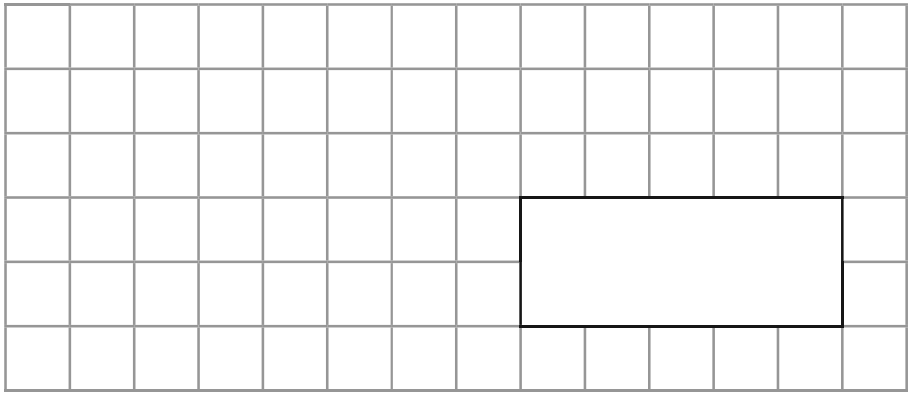
6. Sunnah is planning her party. She has worked out that each party bag will cost 59p to make. How much will it cost her to make party bags for each of her nine friends?



7. James gets three sessions of trampolining for £17. How much would 12 sessions cost?

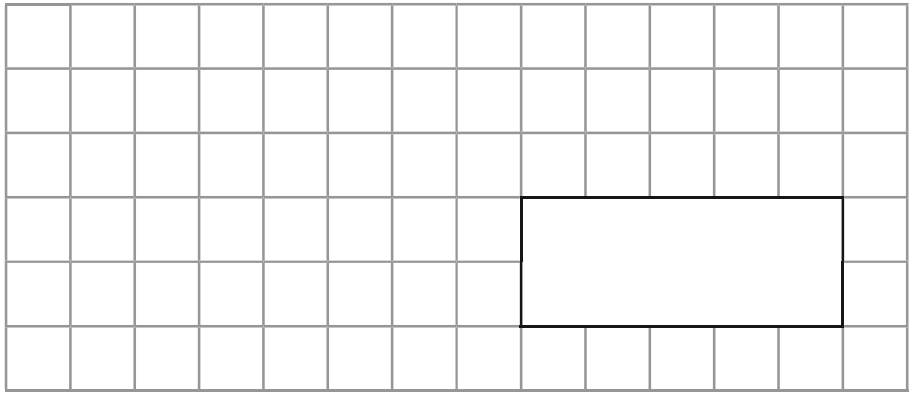


8. Annie's drink is made by mixing 250ml of orange juice with 200ml of apple juice and 50ml of strawberry juice. How much apple juice is needed if she is making her drink contain a total of 250ml?

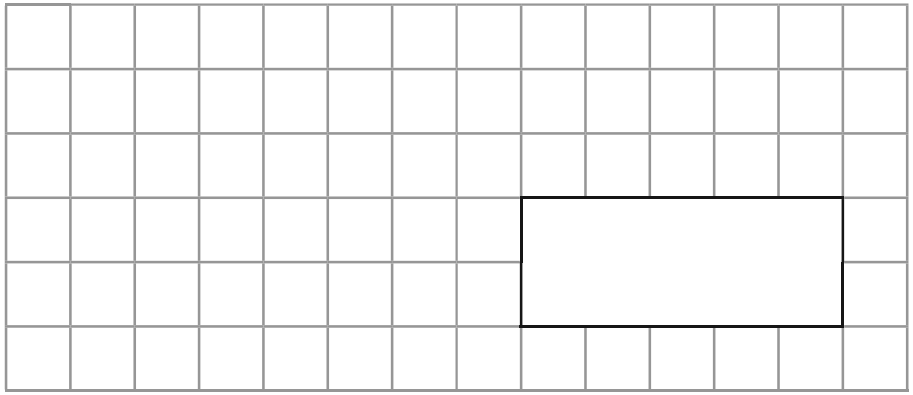


Correspondence Type Word Problems

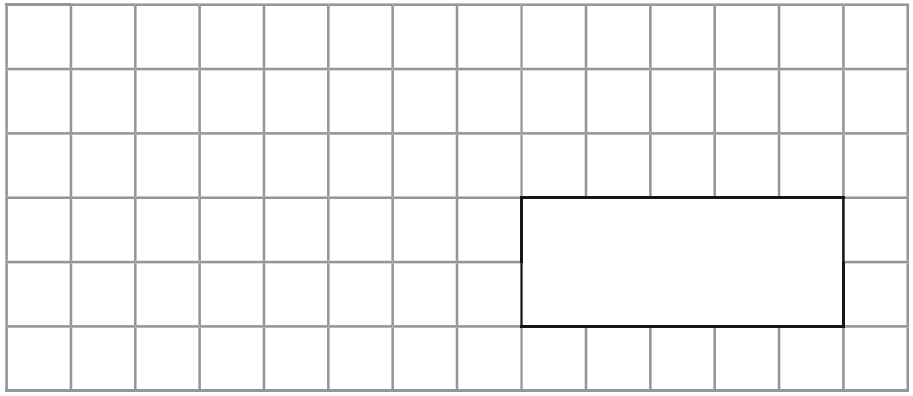
1. Greg gets paid 7p for every newspaper he delivers. How many must he deliver to earn at least 5 pounds?



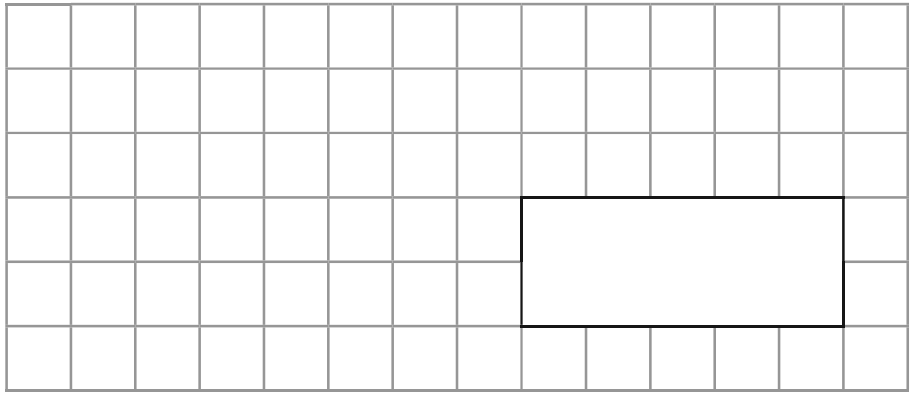
2. A pizza restaurant offers five different pizzas (Hawaiian, Pepperoni, Vegetarian, Meat Feast and Margherita) and five types of base (Italian, Deep Pan, Stuffed Crust, Square and Thin and Crispy). How many different combinations are available?



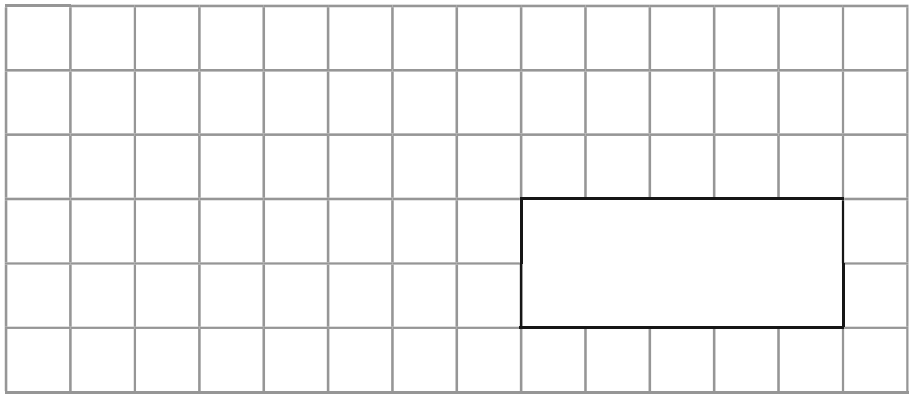
3. Travis has designed a computer program which multiplies any number put in by a number chosen by the computer. He inputs four numbers and the answers which come out are 49, 126, 98 and 154. Which number might his program be multiplying by?



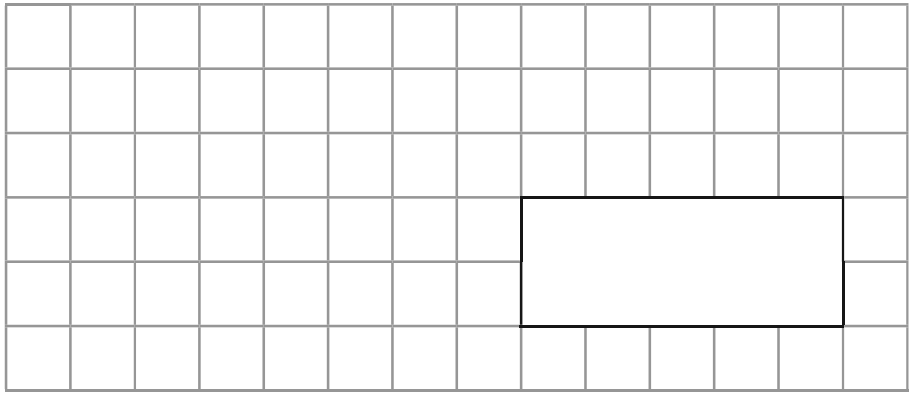
4. Gerrard is making a sequence with shapes – he uses 4 squares, 6 triangles and 3 circles. If he uses the same pattern to make a longer sequence, how many squares would he use if he used 65 shapes in total?



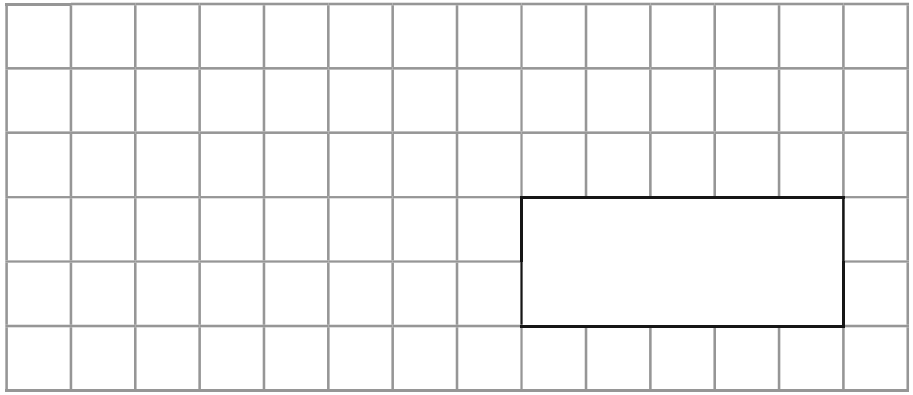
5. Anja stands by the side of the road counting the wheels on the vehicles that go past her. If she counts 250 wheels, how many cars and how many bikes might she have seen?



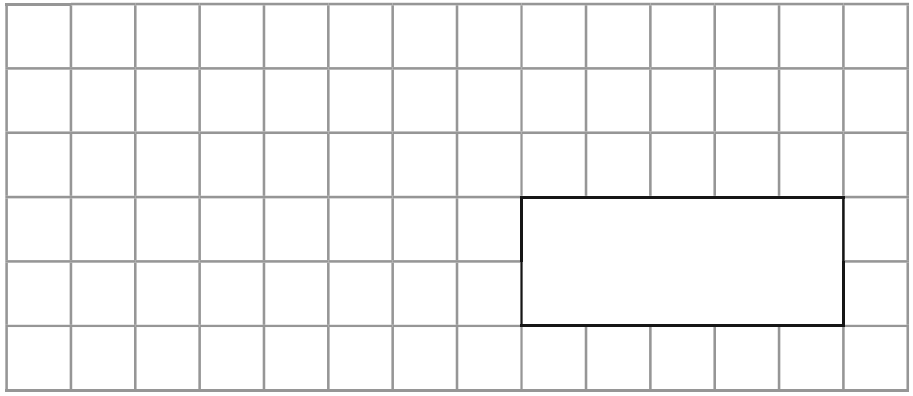
6. Robbie is 90 cm tall. If he grows 10 cm next year and then 1 cm less each year after that, how tall will he be in ten years?



7. A mother and a father are the same age and they have triplets. The total of all the ages in the family added together is 79. Can you find two possibilities for the family's ages?



8. A shop sells these drinks: Orange Juice, Lemonade, Coke and Water and these crisps: Pickled Onion, Plain and Salt and Vinegar. If you went into the shops and bought one drink and one packet of crisps, how many different possible combinations would there be?



Daily News

Bee Quack

What is a queen bee?

- **Honeybee colonies can have up to 50 000 bees in them, but only one is the queen bee.**
- **Queen bees are created when, as larvae, they are fed royal jelly.**

Photo: Honeybees.

Scientists Study Why Bees 'Quack'

We all know that bees buzz. However, did you know they can 'toot' and 'quack' too?

It used to be believed that the 'tooting' and 'quacking' sounds queen bees make were aimed at other queen bees. It was thought the noises were signs of anger.

However, researchers at Nottingham Trent University, UK, have been studying these noises and they think they have a new theory.

The scientists think that the sounds are instructions for the worker bees instead.

When a queen bee is ready to hatch, she makes 'quacking' noises.

The scientists think this is to let the worker bees nearby know that she is ready to emerge.

After hatching, her 'quacks' become 'toots'.

When the worker bees hear the 'toots', they try to keep the other queen bees (who are still waiting to hatch) captive.

If two queen bees emerge at the same time, they will fight to the death.

When hearing the 'toots', the worker bees also get ready to swarm. This is when a new queen bee, and up to half the bees in the hive, leave to set up a new colony.

Honey bees are really important for the environment because they pollinate plants. Pollination is how plants make new seeds. The researchers hope that their findings will help beekeepers to better look after these helpful little creatures.

Glossary

theory	An idea based on scientific research.
emerge	Break out from an egg or cocoon.
captive	A person or animal which is imprisoned or confined.
colony	A group of animals that live together.

Questions

1. How does a queen bee let other bees know she is ready to hatch?

_____

2. In the paragraph beginning "It used to be believed..." which word means 'for the attention of'?

_____

3. Tick the boxes to show if each statement is true or false.

	True	False
All bees can 'toot' and 'quack' as well as buzz.		
Queen bees 'toot' before hatching.		
If two queen bees emerge at the same time, they work together to build a stronger hive.		
The researchers hope their findings will help beekeepers.		

4. Which of these alternative headlines best summarises the story?

- ◯ Pollinators under Threat from Queen Bees
- ◯ Honeybees Play Instruments
- ◯ Queen Bees Talk to Their Workers
- ◯ Bees Communicate with Other Species

5. Using information from the article, fill in the gaps to complete the following sentences.

Scientists think _____'quack' to tell worker bees that they are ready to hatch. They then 'toot' to tell the _____to keep the other queen bees sealed up and to prepare to _____.

6. How have scientists' thoughts about queen bees 'tooting' and 'quacking' changed?

_____

_____

_____

Word Search
4 Times Table

Answer the calculations below and find the answers in the word search:

4 x 3 = 12
4 x 4 = 16
4 x 11 = 44
4 x 8 = 32
4 x 10 = 40
4 x 2 =8

f	t	h	i	r	t	y	t	w	o
t	o	h	f	o	r	t	y	w	o
w	t	r	s	i	x	e	e	t	e
e	w	r	t	e	s	e	s	h	i
l	s	e	l	y	n	l	h	i	g
v	k	i	e	t	f	e	e	r	h
e	a	e	y	e	a	o	t	t	t
f	o	r	t	e	o	o	u	y	e
o	n	n	e	e	t	h	g	r	e
s	i	x	t	e	e	n	b	n	n

Word Search
3 Times Table

Answer the calculations below and find the answers in the word search:

3 x 3 = 9
3 x 4 = 12
3 x 10 = 30
3 x 6 = 18
3 x 2 = 6
3 x 7 =21

e	t	h	i	r	t	y	n	e	l
t	n	h	x	t	t	e	r	t	o
w	i	u	e	d	b	i	w	n	e
e	n	r	w	e	s	e	e	o	s
l	e	e	l	p	n	e	h	u	i
v	k	e	e	t	t	i	e	r	x
e	a	e	y	h	a	u	t	n	e
m	q	o	g	e	o	o	k	i	e
o	n	i	e	e	t	h	g	n	e
e	e	d	j	p	z	o	b	n	n

Word Search
8 Times Table

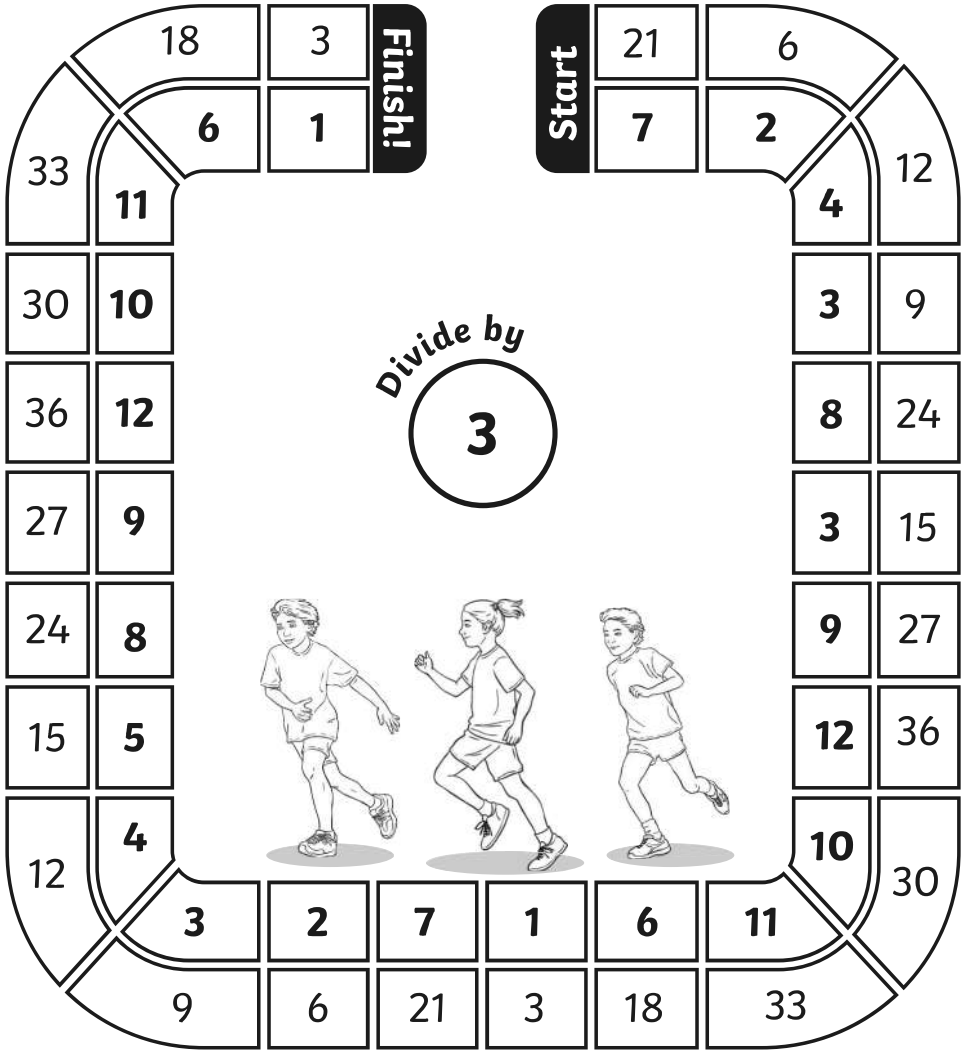
Answer the calculations below and find the answers in the word search:

5 x 8 = 40
8 x 7 = 56
8 x 3 = 24
4 x 8 = 32
8 x 10 = 20
8 x 2 = 16

t	o	e	v	e	n	e	y	i	e
h	w	h	t	w	e	i	v	e	f
i	t	e	e	d	b	g	n	o	i
r	y	e	n	e	s	h	r	h	f
t	t	e	e	t	y	t	e	i	t
y	r	i	r	t	y	y	e	r	y
t	i	y	t	r	o	f	t	t	s
w	h	e	w	u	o	u	o	y	i
o	t	o	o	e	t	e	o	u	x
e	s	i	x	t	e	e	n	n	r

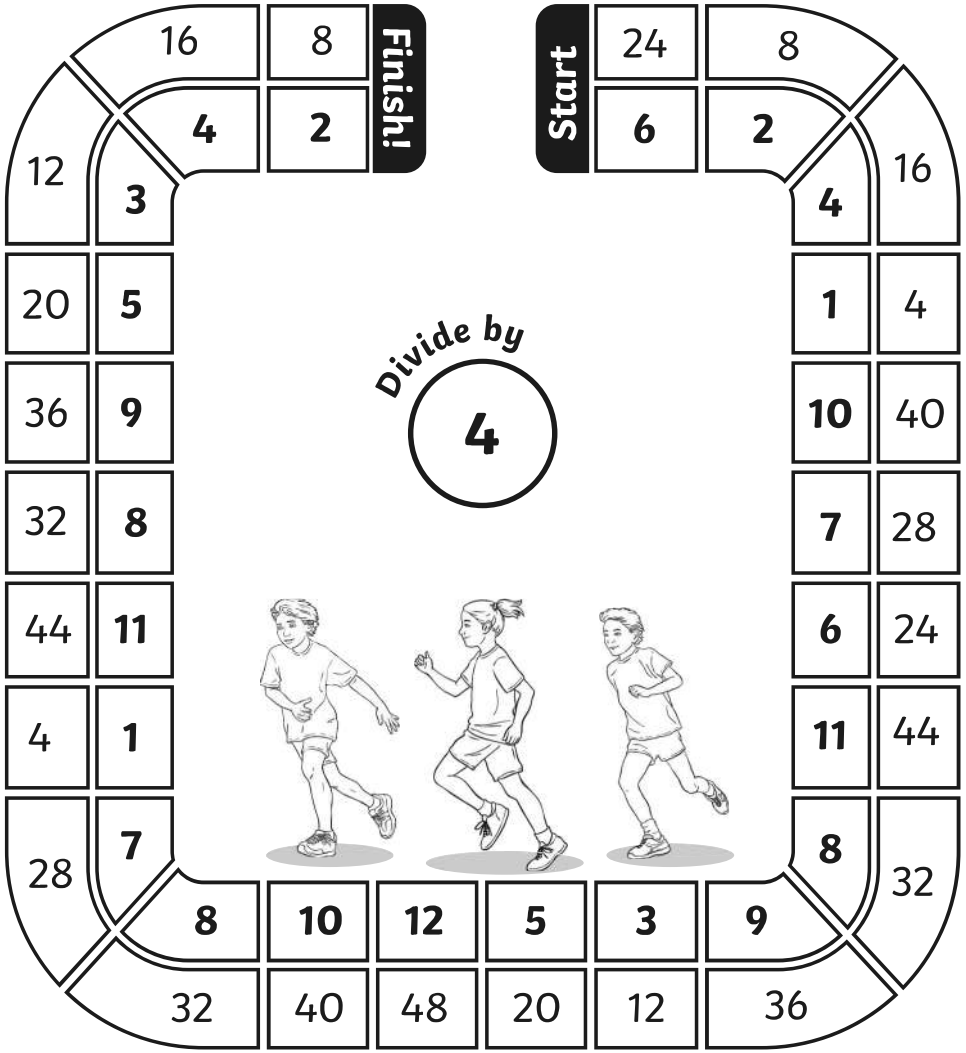
Division by 3 Race

Take the number in the circle below and divide the numbers outside of the track by it. Write your answers as you go and see how long it takes you to finish the race!



Division by 4 Race

Take the number in the circle below and divide the numbers outside of the track by it. Write your answers as you go and see how long it takes you to finish the race!



Division by 8 Race

Take the number in the circle below and divide the numbers outside of the track by it. Write your answers as you go and see how long it takes you to finish the race!

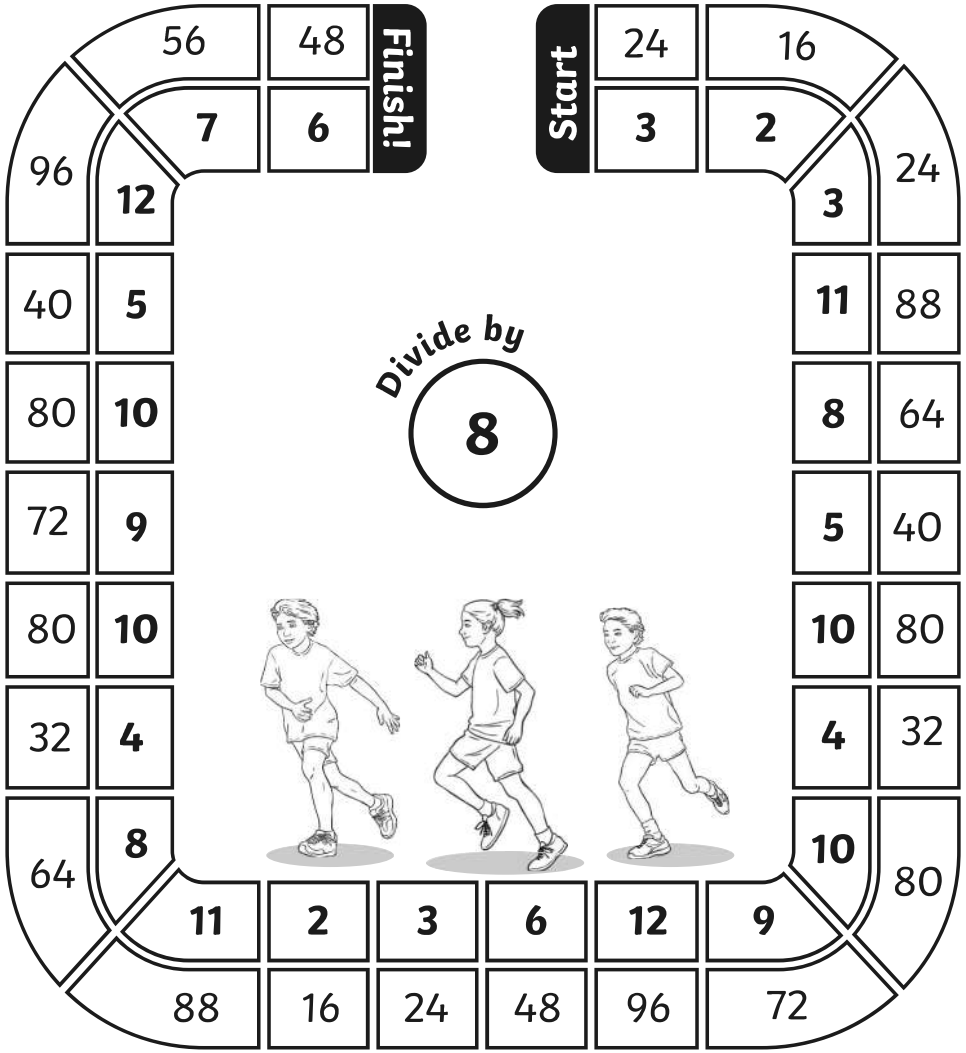


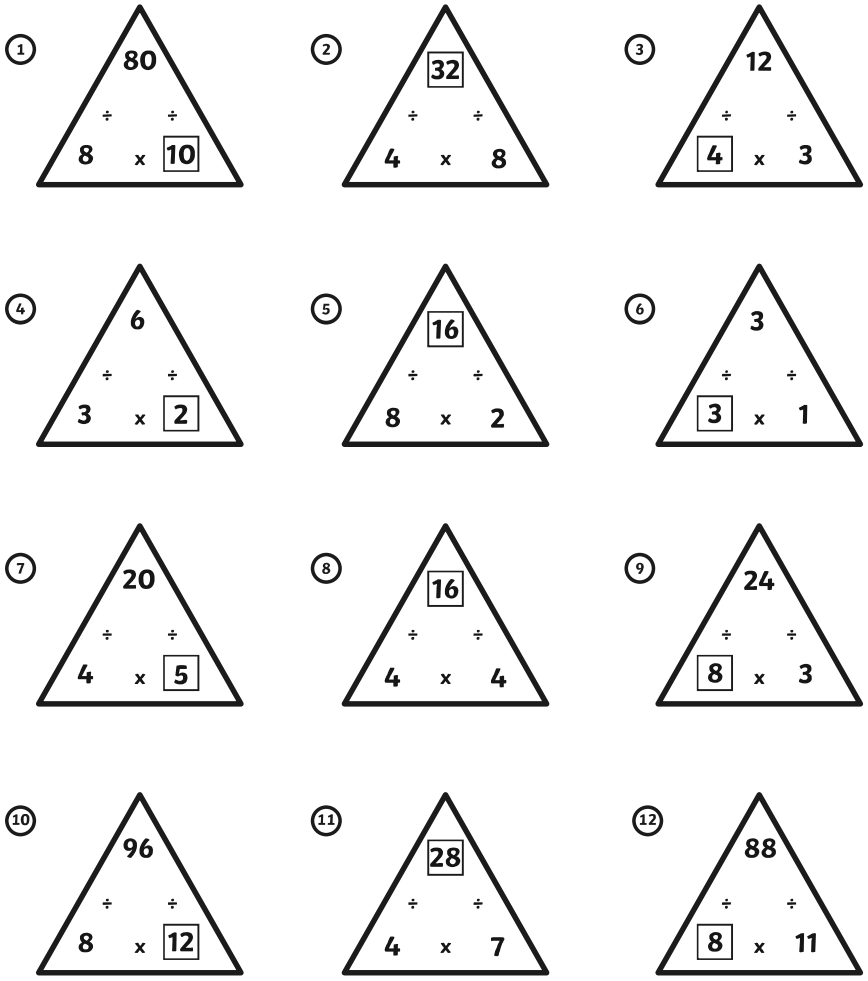
Table at the Double

Find the 2x table by doubling each number. Find the 4x table by doubling the 2x table. Find the 8 times table by doubling the 4x table. Can you complete the whole sheet?

Number	x2	x4	x8
2	4	8	16
3	6	12	24
4	8	16	32
5	10	20	40
6	12	24	48
7	14	28	56
8	16	32	64
9	18	36	72
10	20	40	80
11	22	44	88
12	24	48	96
15	30	60	120
20	40	80	160
50	100	200	400
100	200	400	800

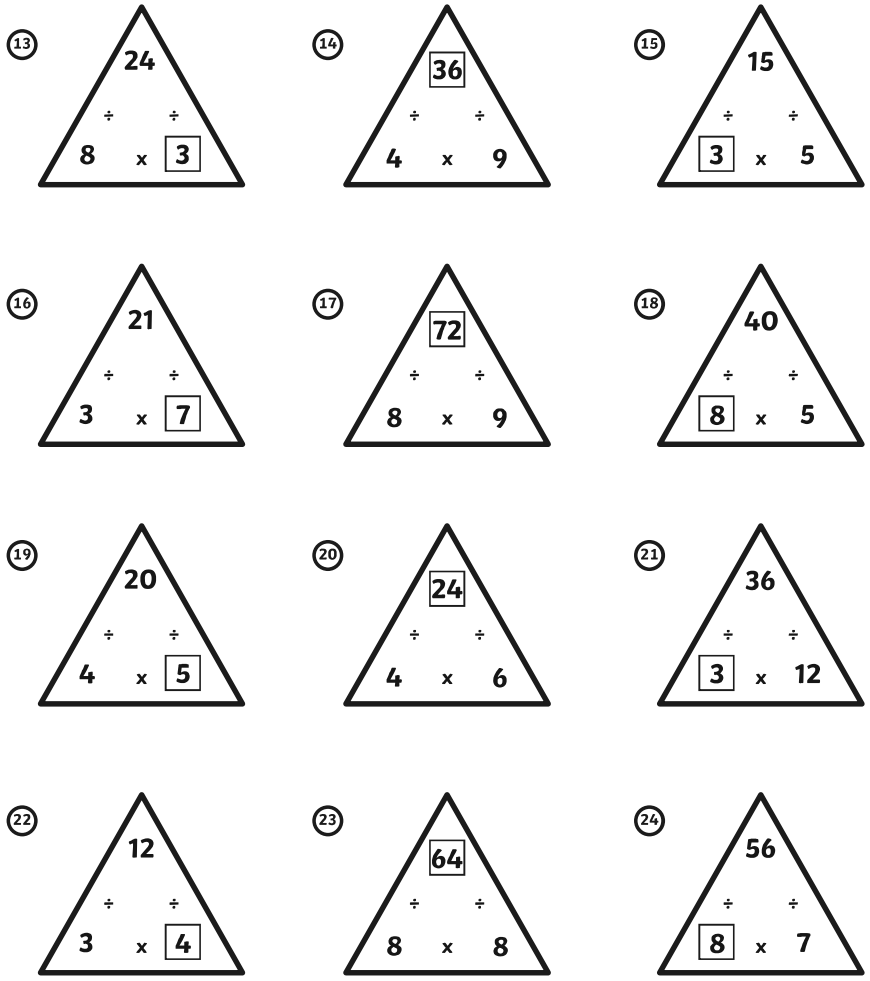
Multiplication Triangles Sheet 1

Fill in the blanks in these multiplication triangles.



Multiplication Triangles Sheet 2

Fill in the blanks in these multiplication triangles.



Mental Multiplication

Try using these mental calculation strategies to see how many of these calculations you can perform mentally.

x4

Double the number and then double it again.

e.g. 13 x 4 = 52
(13 x 2 = 26,
26 x 2 = 52)

x5

Double the number by 10 an then half it.

e.g. 14 x 5 = 70
(14 x 10 = 140,
140 ÷ 2 = 70)

x8

Double the number, double it again and then double it a third time.

e.g. 13 x 8 = 104
(13 x 2 = 26, 26 x 2 = 52,
52 x 2 = 104)

x9

Multiply the number by 10 and then subtract the number.

e.g. 15 x 9 = 135
(15 x 10 = 150,
150 - 15 = 135)

x11

Multiply the number by 10 and then add the number.

e.g. 7 x 11 = 77
(7 x 10 = 70,
7 + 7 =77)

x15

Multiply the number by 10 and thena add half of the total.

e.g. 12 x 15 = 180
(12 x 10 = 120,
120 ÷ 2 = 60, 60 + 120 = 180)

1. 14 x 4 = **56**
2. 13 x 5 = **65**
3. 6 x 8 = **48**
4. 8 x 9 = **72**
5. 9 x 11 = **99**
6. 6 x 15 = **90**
7. 15 x 4 = **60**
8. 9 x 5 = **45**
9. 12 x 8 = **96**
10. 13 x 9 = **117**
11. 10 x 11 = **110**
12. 12 x 15 = **45**
13. 15 x 4 = **60**
14. 20 x 5 =**100**
15. 5 x 8 =**40**
16. 12 x 9 = **108**
17. 13 x 11 = **143**
18. 8 x 15 = **120**
19. 4 x 8 = **32**
20. 9 x 15 = **135**
21. 11 x 15 = **165**
22. 14 x 8 = **112**

Multiplying 2-digit Numbers by 1-digit Numbers Using the Grid Method

①

x	10	3
9	90	27

②

x	70	1
5	350	5

③

x	50	6
5	250	30

④

x	20	3
3	60	9

⑤

x	80	9
9	720	81

⑥

x	60	3
7	420	21

⑦

x	70	5
7	490	35

⑧

x	10	3
5	50	15

⑨

x	20	8
9	180	72

⑩

x	50	3
8	400	24

New Bus Stop Method Formal Division of 2-digit Numbers

LO: I can use a formal method of division.

① 69 ÷ 3 = **23**

② 88 ÷ 4 = **22**

③ **90 ÷ 5 = 18**

④ **76 ÷ 4 = 19**

⑤ **72 ÷ 3 = 24**

⑥ **70 ÷ 5 = 14**

⑦ **24 ÷ 2 = 12**

⑧ **56 ÷ 4 = 14**

⑨ **36 ÷ 3 = 12**

⑩ **65 ÷ 5 = 13**

⑪ **96 ÷ 4 = 24**

⑫ **90 ÷ 6 = 15**

⑬ **96 ÷ 8 = 12**

⑭ **96 ÷ 6 =16**

⑮ **88 ÷ 8 = 11**

⑯ **80 ÷ 4 = 20**

⑰ **95 ÷ 5 = 19**

⑱ **92 ÷ 4 = 23**

⑲ **46 ÷ 2 = 23**

⑳ **78 ÷ 6 = 13**

㉑ **92 ÷ 4 = 23**

㉒ **84 ÷ 4 = 21**

㉓ **72 ÷ 3 = 24**

㉔ **70 ÷ 7 = 10**

㉕ **88 ÷ 4 = 22**

㉖ **80 ÷ 5 = 16**

㉗ **98 ÷ 7 = 14**

㉘ **66 ÷ 3 = 22**

㉙ **84 ÷ 4 = 21**

㉚ **91 ÷ 7 = 13**

Division using a Numberline

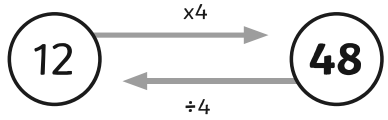
1. 8 ÷ 2 = 4
2. 9 ÷ 3 = 3
3. 12 ÷ 4 = 3
4. 12 ÷ 3 = 4
5. 18 ÷ 3 = 6
6. 18 ÷ 6 = 3
7. 36 ÷ 3 = 12
8. 48 ÷ 4 = 12
9. 18 ÷ 3 = 6
10. 18 ÷ 6 = 3
11. 28 ÷ 7 = 4
12. 32 ÷ 8 = 4
13. 42 ÷ 3 = 14
14. 32 ÷ 4 = 8
15. 52 ÷ 4 = 13
16. 70 ÷ 5 = 14
17. 48 ÷ 6 = 8
18. 54 ÷ 6 = 9
19. 96 ÷ 8 = 12
20. 88 ÷ 8 = 11
21. 88 ÷ 4 = 22
22. 64 ÷ 8 = 8
23. 91 ÷ 7 = 13
24. 108 ÷ 9 = 12

I'm Thinking of a Number

Use the inverse operation to work backwards and find the original number.

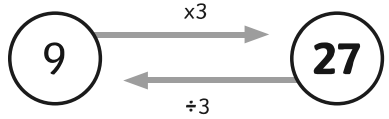
Example:

Samiya is thinking of a number. She multiplies it bt 4 and her new number is 48. What number was she first thinking of?

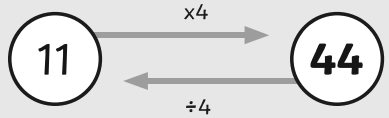


Questions:

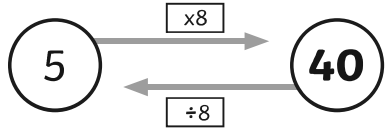
1. Nat is thinking of a number. He multiplies it by 3 and his new number is 27. What number was he first thinking of?



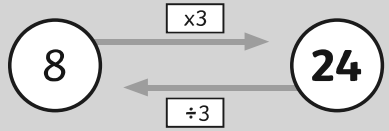
2. Shahid is thinking of a number. He divides it by 4 and his new number is 11. What number was he first thinking of?



3. Esme is thinking of a number. She divides it by 8 and her new number is 5. What number was she first thinking of?



4. Taylor is thinking of a number. He multiplies it by 3 and his new number is 24. What number was he first thinking of?



5. Levi is thinking of a number. He multiplies it by 8 and his answer is 32. What number was he first thinking of?

4

6. Vivi is thinking of a number. She multiplies it by 3 and her new number is 12. What number was she first thinking of?

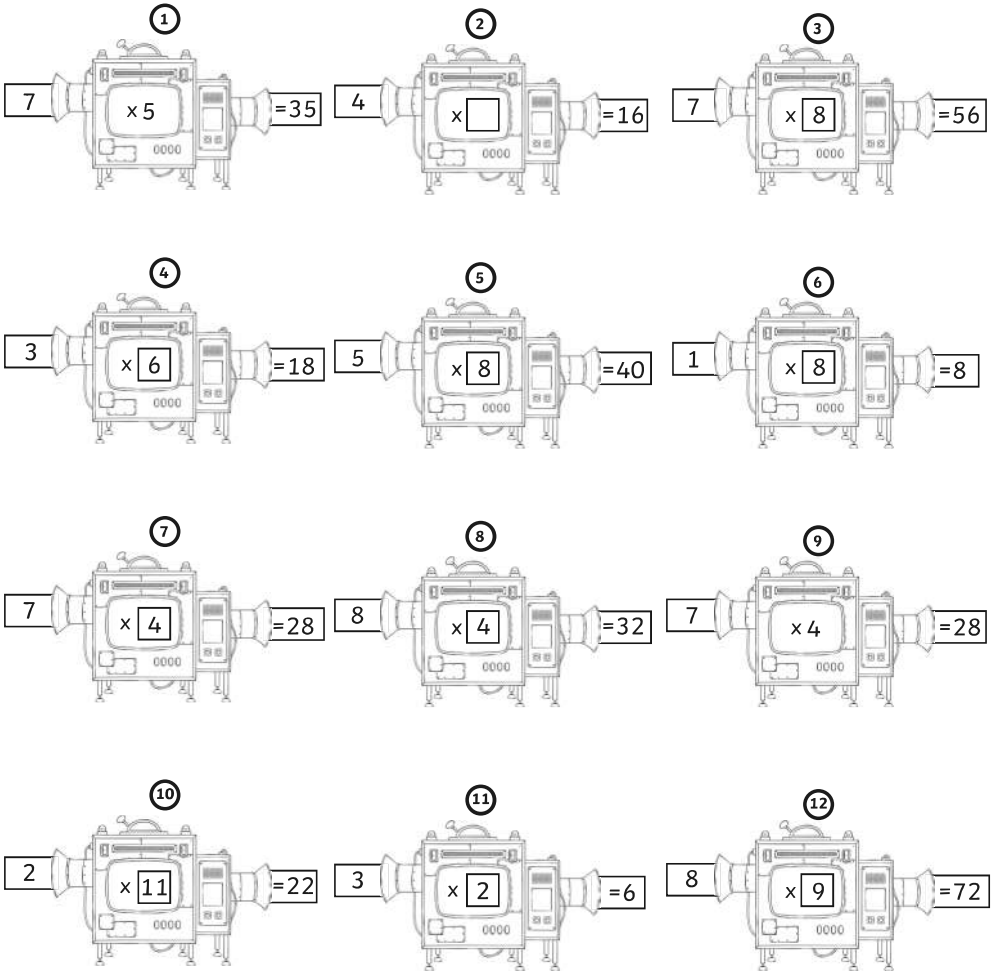
36

Deriving Related Multiplication Facts From Known Multiplication Tables

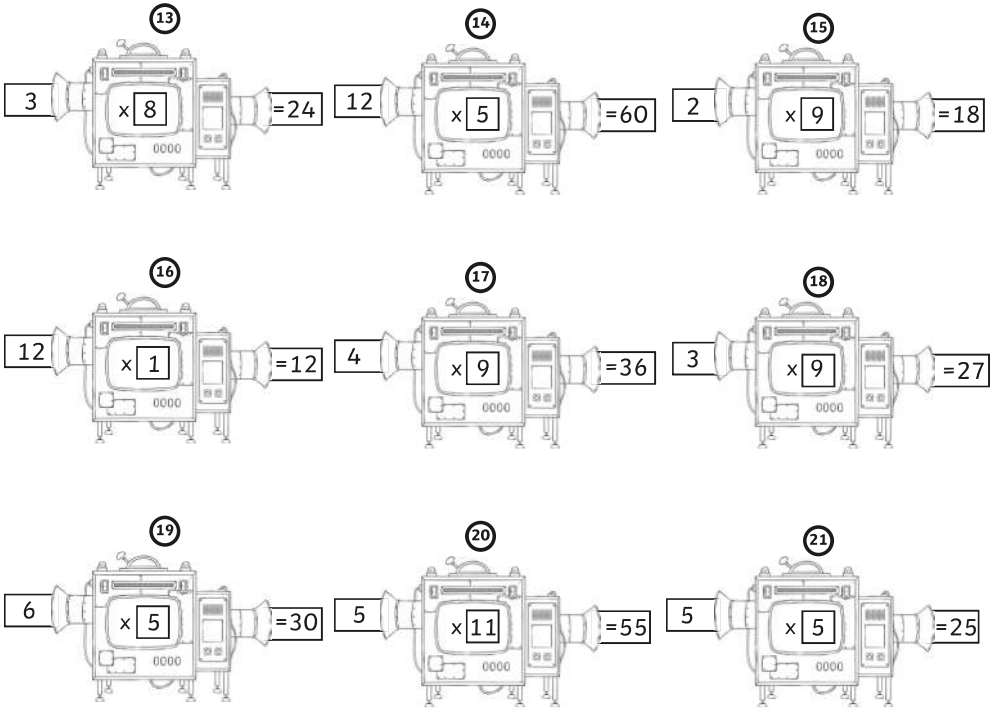
Complete the times tables question on the small lorries then use the answers to complete the associated facts on the big lorries!

1	3 x 4 = 12	3 x 40 = 120	4 x 30 = 120	4 x 3 = 12
2	3 x 6 = 18	3 x 60 = 180	6 x 30 = 180	6 x 3 = 18
3	3 x 7 = 21	3 x 70 = 210	7 x 30 = 210	7 x 3 = 21
4	4 x 4 = 16	4 x 40 = 160	40 x 4 = 160	4 x 4 = 16
5	4 x 7 = 28	40 x 7 = 280	7 x 40 = 280	7 x 4 = 28
6	3 x 8 = 24	3 x 80 = 240	8 x 30 = 240	8 x 3 = 34
7	4 x 9 = 36	4 x 90 = 360	9 x 40 = 360	9 x 4 = 36
8	8 x 5 = 40	8 x 50 = 400	5 x 80 = 400	5 x 8 = 40
9	8 x 9 = 72	8 x 90 = 720	9 x 80 = 720	9 x 8 = 72
10	8 x 6 = 48	8 x 60 = 480	6 x 80 = 480	6 x 8 = 48

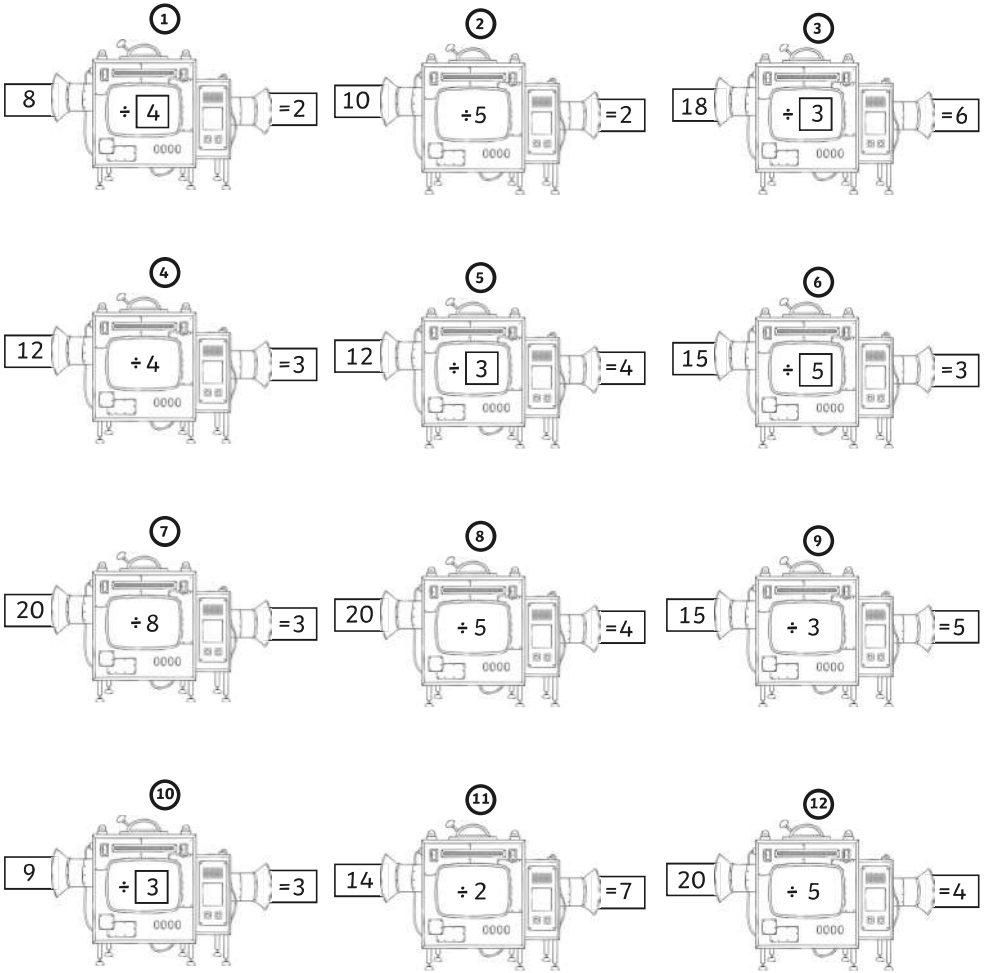
Multiplication Missing Numbers



Multiplication Missing Numbers



Division Missing Numbers



Division Missing Numbers

13) 27 ÷ 3 = 9

14) 18 ÷ 2 = 9

15) 28 ÷ 4 = 7

16) 48 ÷ 4 = 12

17) 40 ÷ 5 = 8

18) 22 ÷ 2 = 11

19) 30 ÷ 2 = 15

20) 33 ÷ 11 = 3

21) 21 ÷ 3 = 7

Scaling Problems

1) There are three biscuits in a packet. How many are there in seven packets?

Answer: **21**

2) There are six stickers in a pack, how many packs do you need to buy to have 30 stickers?

Answer: **5**

3) I have eight 5p coins in my money box. How much money do I have?

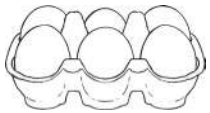
Answer: **40p**

4) Joe builds a tower which is five bricks tall. Gina builds one four times as high. How many bricks does Gina use?

Answer: **20**

Scaling Problems

5. There are six eggs in a box - how man boxes are needed to make 48 eggs?



Answer: **8**

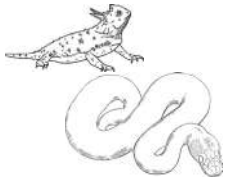
6. Danyal has a 5p coin, a 2p coin and a 1p coin. Dylan has three times as much. How much does Dylan have?

Answer: **24p**

7. Lisa has four cubes. Ned has double the number of cubes Lisa has. Mina has double the number of cubes that Ned has. How many cubes does everyone have?

Lisa: **4**
Ned: **8**
Mina: **16**

8. A lizard is four centimetres long. A snake is nine times as long. How long is the snake?



Answer: **36m**

Colour the Division Equation

Can you colour all the lines of three number squares that make a division equation? The line can be in any order but squares must be beside eachother in a column or in a row. Squares can be part of more than one equation.

The example is 15 ÷ 3 = 5 is shown below.

1.

15	6	8	60	5	12	1	12
5	1	5	7	16	4	23	12
3	21	4	9	7	3	1	1
8	3	20	10	2	17	16	1
4	1	1	5	3	16	2	8
32	18	9	2	2	4	7	2
25	3	15	3	4	4	4	16
18	6	1	6	9	13	9	14

2.

88	10	31	1	41	21	6	27
8	25	23	4	4	7	9	9
11	1	11	9	21	3	9	3
3	15	5	2	10	12	14	24
33	3	55	3	4	4	16	8
4	44	11	2	40	8	5	15
7	8	13	2	5	2	10	20
28	4	7	8	8	4	2	2

3.

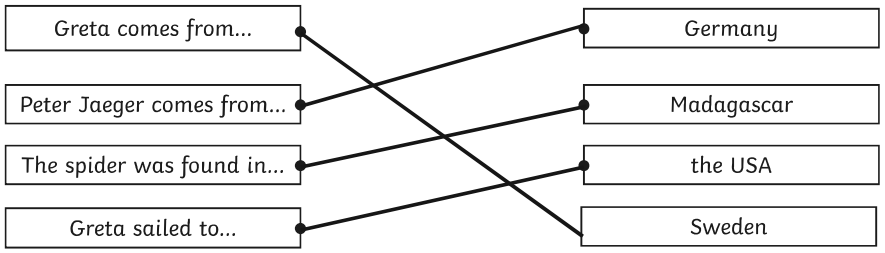
24	12	2	1	3	7	14	35
21	17	4	9	8	10	2	5
19	20	8	4	32	2	7	7
6	10	2	20	11	5	5	25
5	5	4	5	15	3	1	3
4	2	3	6	2	36	5	2
4	18	9	10	13	12	2	6
16	16	3	27	9	14	12	15

4.

14	18	20	2	10	2	15	6
7	17	4	9	8	4	32	23
2	10	5	22	80	14	8	16
11	9	3	9	28	7	4	10
7	90	15	13	8	35	19	24
25	4	2	15	3	5	6	30
21	12	4	5	12	20	20	10
48	6	8	12	4	4	16	3

Answers

1. Draw a line to match the country to the information in the story.



2. Fill in the gap to the complete this sentence from the story.
   It's the **400th** time he's found a new type of spider.

3. 'Her actions inspired Peter Jaeger.'
   Tick the word that is closest in meaning to 'inspired'.

   ○ annoyed
   ✓ **impressed**
   ○ surprised
   ○ saddened

4. Why do you think scientists name animals after famous people? Explain your answer.
   Accept any answer that explains that scientists could name an animal after a well-known character or person to show respect, e.g. I think scientists name animals after famous people because they respect that person.

5. Do you think Greta was right to miss school to protest? Explain why you think this.
   Accept any reasonable answer where the student gives their opinion followed by an explanation, e.g. I don't think she should have missed school because school is important for your learning.

6. Write a summary of the story in 20 words or fewer.
   Accept any reasonable summary that is 20 words or fewer in length, e.g. A species of spider has been found and it has been named after Greta Thunberg.

Answers

1. How does a queen bee let other bees know she is ready to hatch?
   They 'quack'

2. In the paragraph beginning "It used to be believed..." which word means 'for the attention of'?
   aimed

3. Tick the boxes to show if each statement is true or false.

	True	False
All bees can 'toot' and 'quack' as well as buzz.		✓
Queen bees 'toot' before hatching.		✓
If two queen bees emerge at the same time, they work together to build a stronger hive.		✓
The researchers hope their findings will help beekeepers.	✓	

4. Which of these alternative headlines best summarises the story?

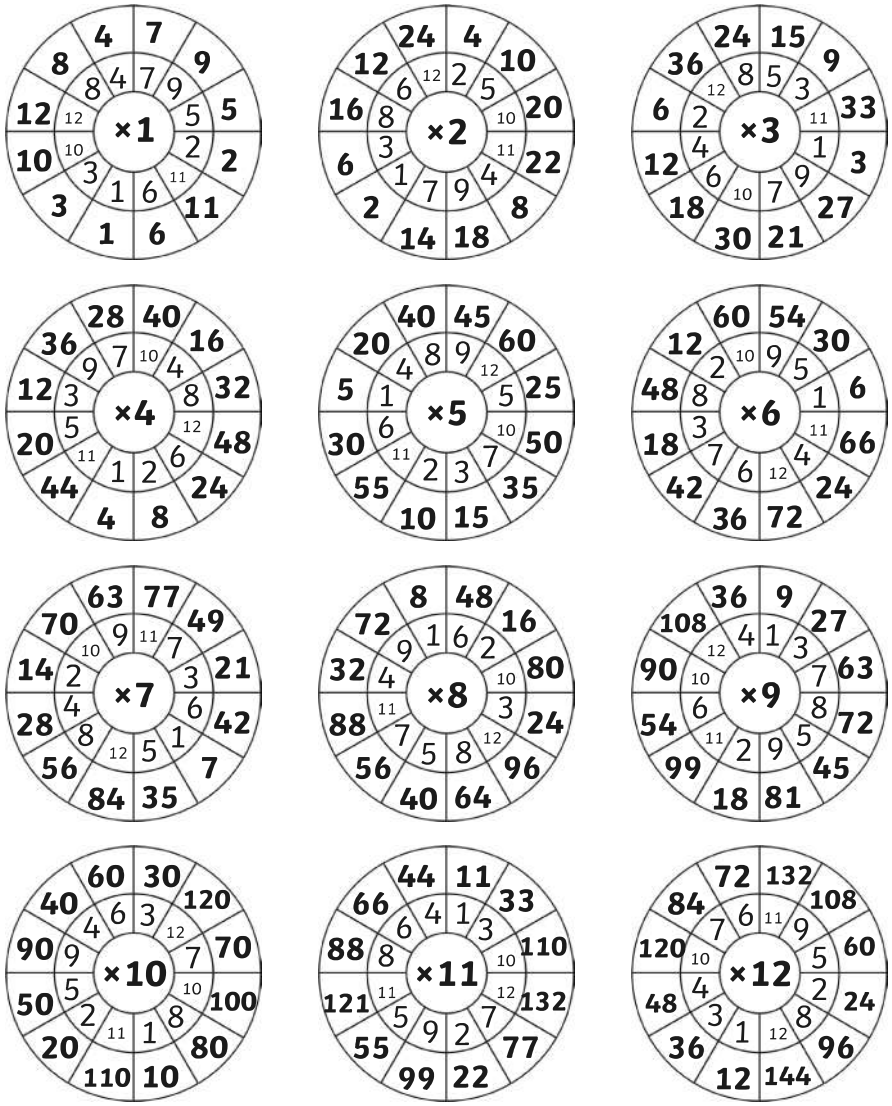
   ○ Pollinators under Threat from Queen Bees
   ○ Honeybees Play Instruments
   ✓ **Queen Bees Talk to Their Workers**
   ○ Bees Communicate with Other Species

5. Using information from the article, fill in the gaps to complete the following sentences.
   Scientists think **queen bees** 'quack' to tell worker bees that they are ready to hatch. They then 'toot' to tell the **worker bees** to keep the other queens sealed up and prepare to **swarm/leave.**

6. How have scientists' thoughts about queen bees 'tooting' and 'quacking' changed?
   Accept an answer which references the sounds the queen bees make being for the workers rather than aimed at other queen bees or as signs of aggression, e.g. They used to think the queen bees were talking to each other; now, they think the queen bees are talking to the worker bees.

Multiplication Wheels

Multiply the numbers by the middle number.



Multiplying Three Numbers

1. 2 × 1 × 2 =	**4**	2. 3 × 2 × 3 =	**18**
3. 3 × 0 × 3 =	**0**	4. 4 × 3 × 2 =	**24**
5. 4 × 3 × 4 =	**48**	6. 5 × 4 × 5 =	**100**
7. 2 × 8 × 2 =	**32**	8. 2 × 7 × 4 =	**56**
9. 5 × 2 × 4 =	**40**	10. 1 × 3 × 9 =	**27**
11. 2 × 4 × 8 =	**64**	12. 2 × 3 × 9 =	**54**
13. 9 × 2 × 5 =	**90**	14. 2 × 2 × 9 =	**36**
15. 4 × 4 × 4 =	**64**	16. 3 × 3 × 3 =	**27**
17. 6 × 2 × 6 =	**72**	18. 7 × 1 × 2 =	**14**
19. 4 × 2 × 8 =	**64**	20. 10 × 2 × 3 =	**60**

Multiplying by 1 and 0 and Dividing by 1

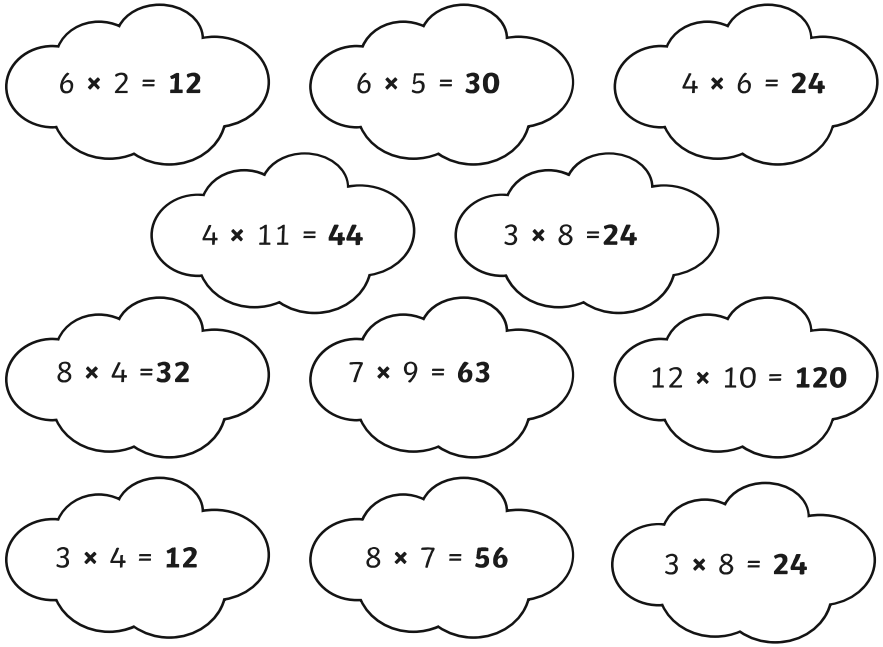
Question	Answer	Question	Answer
A.			
1	**12**	10	**31**
2	**82**	11	**0**
3	**0**	12	**0**
4	**25**	13	**50**
5	**342**	14	**50**
6	**212**	15	**3983**
7	**0**	16	**26**
8	**1**	17	**1**
9	**0**	18	**0**
B.			
1	**72 ÷ 1 = 72**		
2	**79 x 1 = 79**		
3	**65 x 0 = 0**		
C.			

Beginning Number	÷1	×1	×0	÷1	Ending Number
32	**32**	**32**	**0**	**0**	**0**

Beginning Number	÷1	×1	×1	×0	Ending Number
1	**1**	**1**	**1**	**0**	**0**

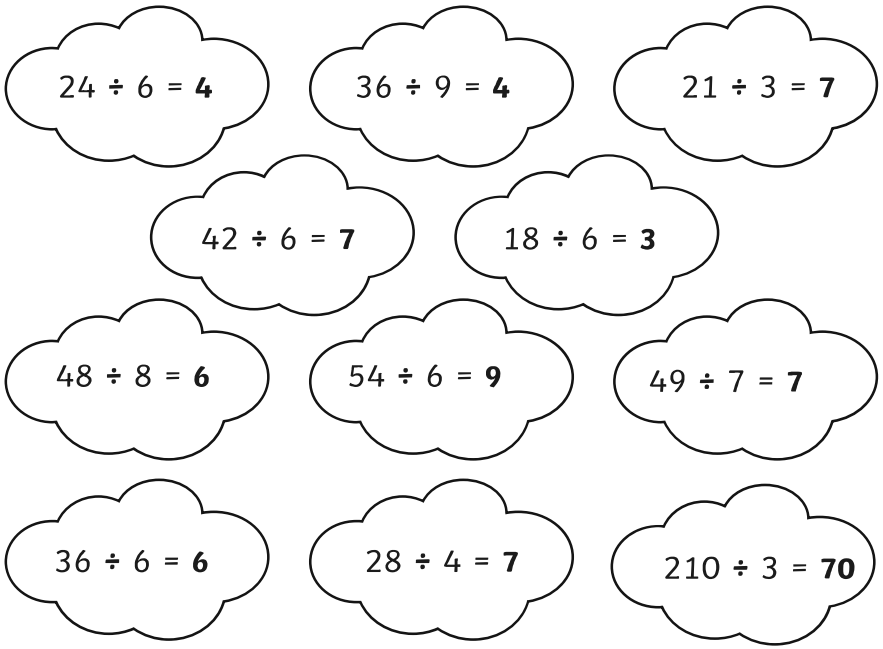
Beginning Number	×1	÷1	×1	÷1	Ending Number
10 000	**10 000**	**10 000**	**10 000**	**10 000**	**10 000**

Multiplying Mentally Using Known Facts



6 × 20 = **120**	40 × 11 = **440**	6 × 50 = **300**	40 × 6 = **240**	3 × 80 = **240**
80 × 4 = **320**	7 × 90 = **630**	120 × 10 = **1200**	3 × 40 = **120**	80 × 7 = **560**
600 × 2 = **1200**	4 × 1100 = **4400**	600 × 5 = **3000**	4 × 600 = **2400**	300 × 8 = **2400**
8 × 400 = **3200**	700 × 9 = **6300**	12 × 1000 = **12000**	300 × 4 = **1200**	8 × 700 = **5600**
60 × 20 = **1200**	40 × 110 = **4400**	60 × 50 = **3000**	40 × 60 = **2400**	30 × 80 = **2400**
80 × 40 = **3200**	70 × 90 = **6300**	120 × 100 = **12000**	30 × 40 = **1200**	80 × 70 = **5600**

Dividing Mentally Using Known Facts



The Commutative Law of Multiplication

In most cases it is better to multiply the larger by the smaller so 17 × 4 = 68; however children may justify why they keep the 5 at the beginning of the calculation e.g. 5 × 27 because they know that 5 × 20 = 100.

17 × 4 = 68	8 × 21 = 168	28 × 8 = 224	21 × 5 = 105
3 × 24 = 72	3 × 18 = 54	7 × 17 = 119	8 × 26 = 208
5 × 17 = 85	28 × 9 = 252	15 × 8 = 120	9 × 24 = 216
29 × 6 = 174	2 × 15 = 30	5 × 27 = 135	7 × 29 = 203
4 × 18 = 72	12 × 4 = 48	3 × 24 = 72	27 × 6 = 162
7 × 11 = 77	29 × 5 = 145	17 × 3 = 51	5 × 17 = 85
19 × 3 = 57	7 × 27 = 189	4 × 14 = 56	
7 × 30 = 210	4 × 29 = 116	6 × 24 = 144	

The Commutative Law of Multiplication

Question	Answer
1	2 × 5 × 12 = 10 × 12 = 120
2	13 × 2 × 2 = 26 × 2 = 52
3	5 × 4 × 10 = 20 × 10 = 200
4	5 × 2 × 5 = 10 × 5 = 50
5	5 × 5 × 4 = 25 × 4 = 100
6	5 × 12 × 10 = 60 × 10 = 600
7	5 × 2 × 14 = 10 × 14 = 140
8	0 × 13 × 7 = 0 × 7 = 0
9	2 × 2 × 2 × 11 = 8 × 11 = 88
10	10 × 10 × 136 = 100 × 136 = 13 600
11	2 × 5 × 3 × 4 × 1 = 10 × 3 × 4 × 1 = 10 × 12 × 1 = 120

Multiplying Two-Digit Numbers by One-Digit Numbers

1. 24 × 4 = 96	2. 22 × 5 = 110	3. 18 × 5 = 90	4. 26 × 3 = 78
5. 12 × 5 = 60	6. 48 × 2 = 96	7. 41 × 9 = 369	8. 31 × 7 = 217
9. 44 × 7 = 308	10. 32 × 7 = 224	11. 62 × 3 = 186	12. 66 × 4 = 264
13. 82 × 4 = 328	14. 87 × 8 = 696	15. 94 × 8 = 752	16. 53 × 8 = 424
17. 85 × 4 = 340	18. 75 × 3 = 225	19. 68 × 6 = 408	20. 78 × 7 = 546

Three Digit × One Digit Multiplication

Question	Answer
1	**501**
2	**411**
3	**1044**
4	**957**
5	**3145**
6	**2502**
7	**1170**
8	**5553**
9	**972**

Missing Numbers 2-Digit × 1-Digit Multiplication

Question	Answer
1	6, 4
2	1
3	1, 6
4	4, 5
5	0
6	9, 5
7	2
8	7
9	5, 4
10	1, 3
11	1
12	6
13	2
14	1
15	9
16	1, 4
17	8, 4
18	5
19	2
20	9, 4

Question	Answer
21	2
22	9, 3
23	4
24	1
25	5, 2
26	1, 6
27	3, 5
28	7
29	8
30	8, 5
31	4
32	5, 2
33	9
34	3
35	7, 5
36	4, 2
37	2
38	5
39	2, 6
40	4

Multiplying 3-Digit by 1-Digit Numbers

1. $214 \times 4 = 856$
2. $301 \times 4 = 1204$
3. $825 \times 6 = 4950$
4. $656 \times 5 = 3280$
5. $540 \times 3 = 1620$
6. $978 \times 5 = 4890$
7. $216 \times 2 = 432$
8. $209 \times 4 = 836$
9. $966 \times 4 = 3864$
10. $345 \times 3 = 1035$
11. $146 \times 4 = 584$
12. $938 \times 2 = 1876$
13. $676 \times 5 = 3380$
14. $278 \times 3 = 834$
15. $159 \times 3 = 477$
16. $846 \times 4 = 3384$
17. $536 \times 4 = 2144$
18. $365 \times 2 = 730$
19. $271 \times 5 = 1355$
20. $834 \times 4 = 3336$
21. $352 \times 3 = 1056$
22. $742 \times 3 = 2226$
23. $185 \times 4 = 740$
24. $400 \times 3 = 1200$
25. $169 \times 2 = 338$
26. $576 \times 6 = 3456$
27. $136 \times 5 = 680$
28. $482 \times 3 = 1446$
29. $506 \times 3 = 1518$
30. $411 \times 5 = 2055$
31. $749 \times 6 = 4494$
32. $146 \times 2 = 292$
33. $822 \times 2 = 1644$
34. $673 \times 2 = 1346$
35. $907 \times 5 = 4535$
36. $129 \times 2 = 258$
37. $883 \times 2 = 1766$
38. $861 \times 4 = 3444$
39. $854 \times 6 = 5124$
40. $645 \times 5 = 3225$

Correspondence Type Word Problems:

Question	Answer
1	**72**
2	**25 possible combinations**
3	**7**
4	**20**
5	**Multiple possible answers:** ***e.g. 50 cars and 25 bikes = 50 × 4 + 25 × 2 = 250***
6	**90 + 10 + 9 + 8 + 7 + 6 + 5 + 4 + 3 + 2 + 1 = 145cm**
7	**Multiple possible answers:** ***e.g. Raju + Sunnah = 35 Triplets = 3 35 × 2 + 3 × 3 = 79***
8	**12 possible combinations**

Problems Involving Scaling Worksheet

Question	Answer
1	**£5.40**
2	**51cm**
3	**200g**
4	**48 squares**
5	**80 squares**
6	**£5.31**
7	**£68**
8	**100ml**


hello
SUMMER