Multiplication and Division

Workbook

Year 3 Maths

Programme of Study – Multiplication and Division

Statutory Requirements	Worksheet	Page no.	Notes
Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables.	Multiplication 4 times tables word search	2	
	Multiplication 3 times tables word search	3	
	Multiplication 8 times tables word search	4	
	Dividing by 3 race	5	
	Dividing by 4 race	6	
	Dividing by 8 race	7	
	Tables at the Double	8	
	Multiplication triangles activity sheet 3, 4 and 8 times tables	9 - 10	
Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.	Mental Multiplication	11	
	Multiplying 2-digit numbers by 1-digit numbers using grid method	12	
	New bus stop method formal division of 2-digit numbers	13	
	Division using a numberline	14 - 16	
Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects.	I'm thinking of a number	17	
	Deriving multiplication facts	18	
	Multiplication and division missing numbers	19-22	
	Scaling problems	23-24	
	Colour the division equation	25	

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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

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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

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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

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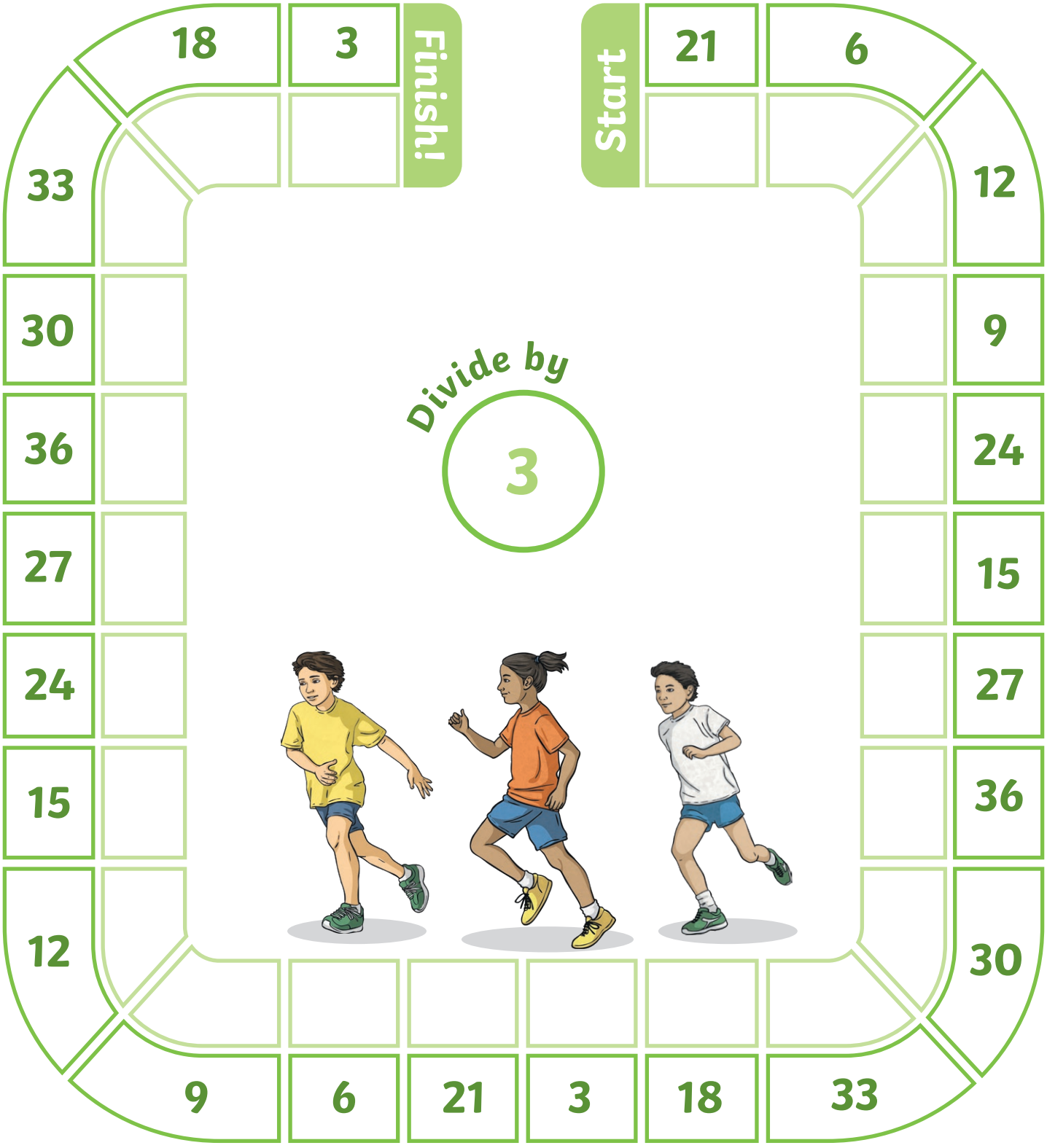
Division by 3 Race

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!



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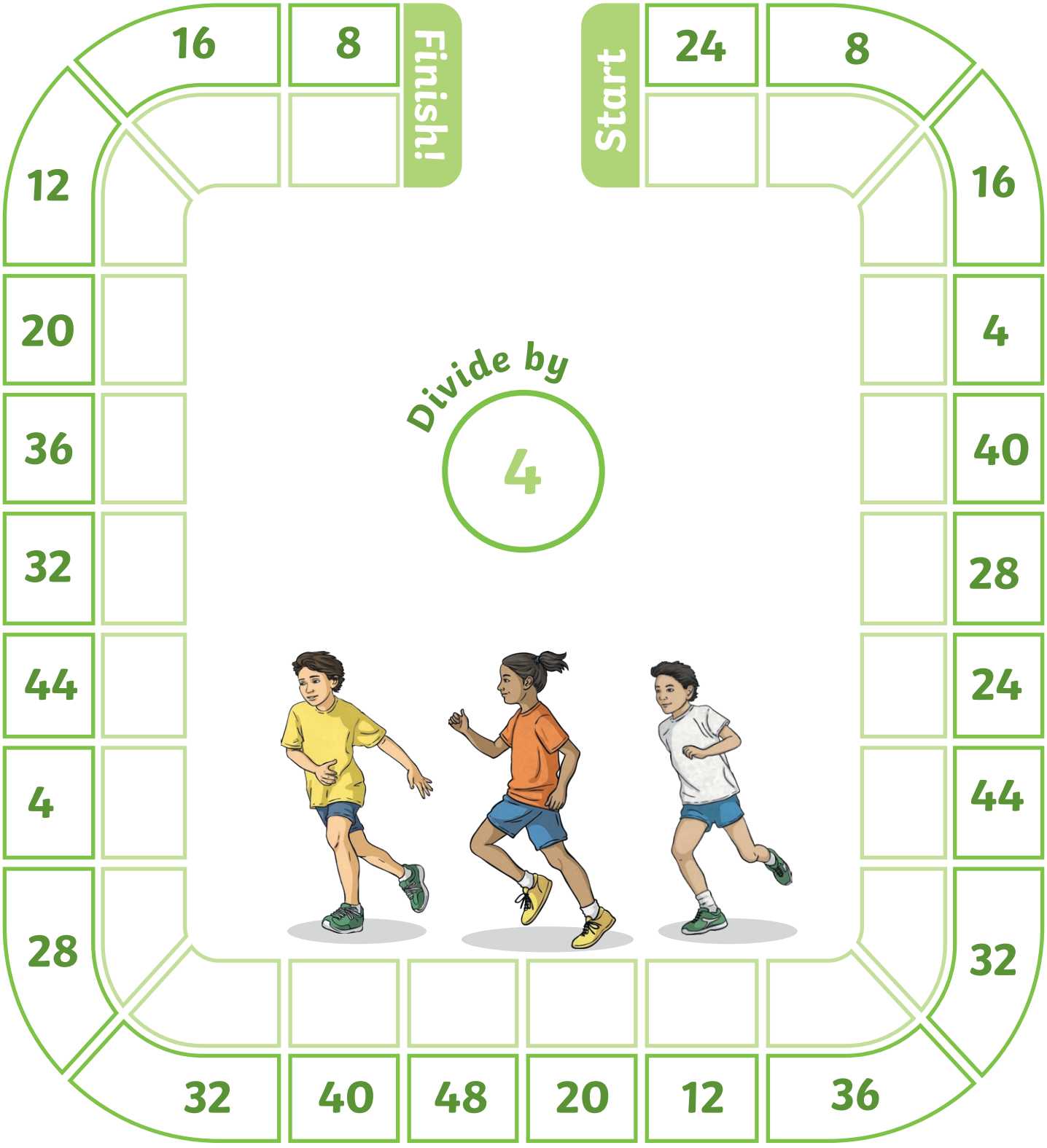
Division by 4 Race

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!



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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!

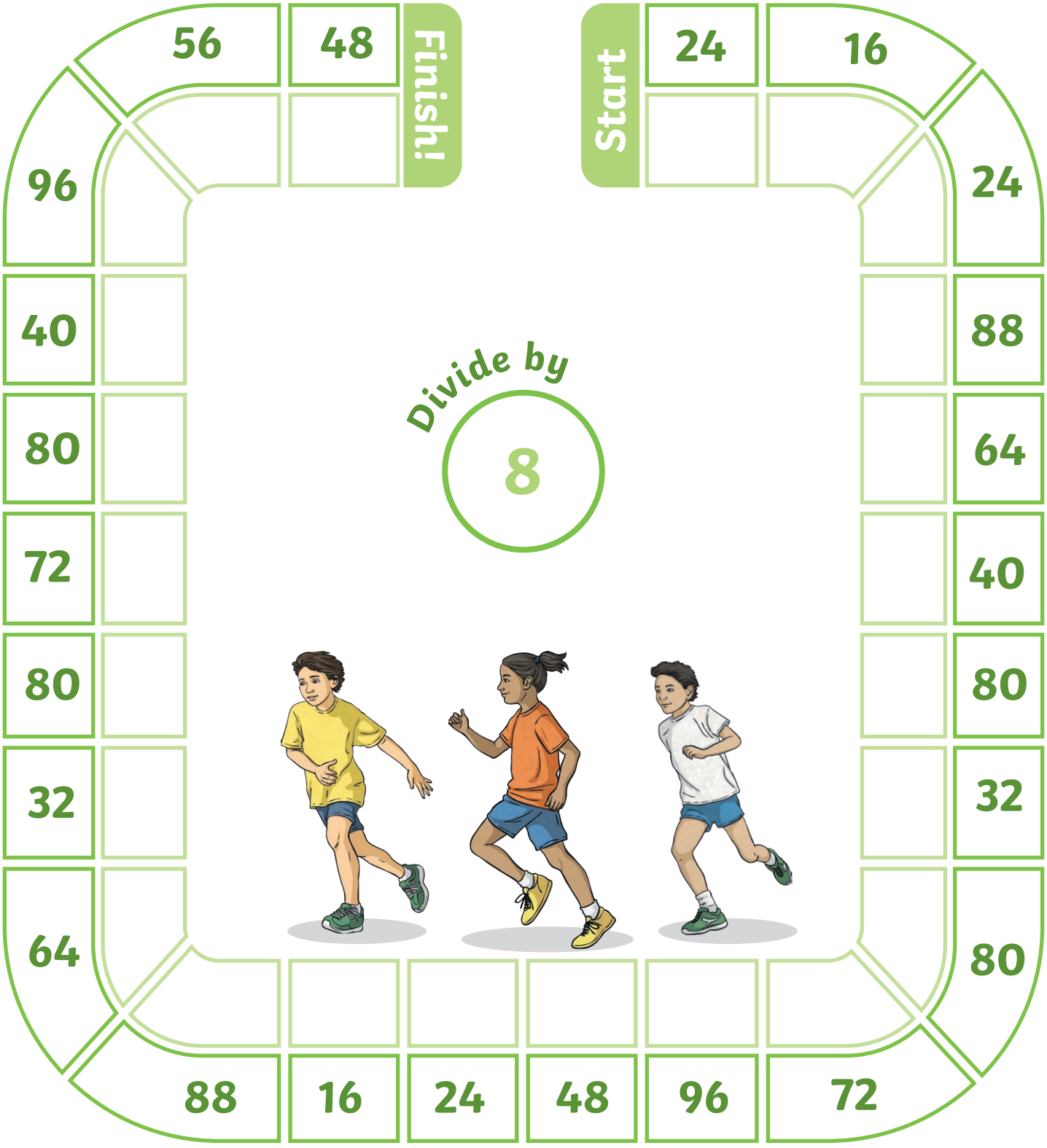

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Table at the Double

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			

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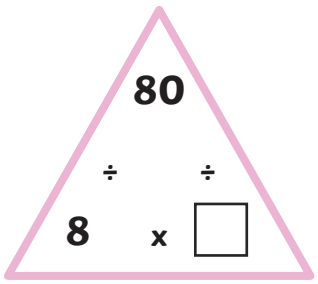
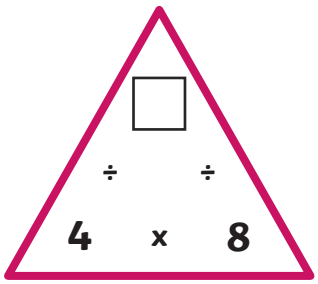
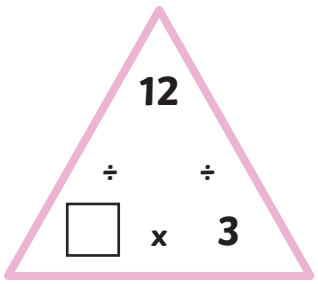
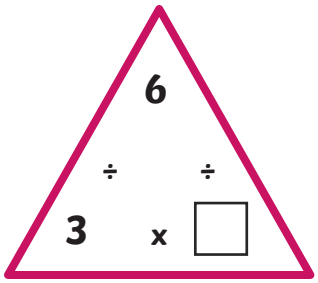
Multiplication Triangles Sheet 1

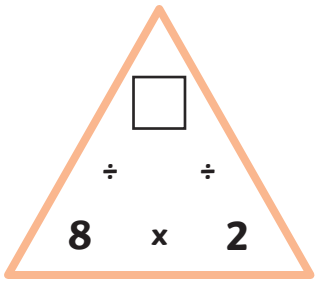
Fill in the blanks in these multiplication triangles.

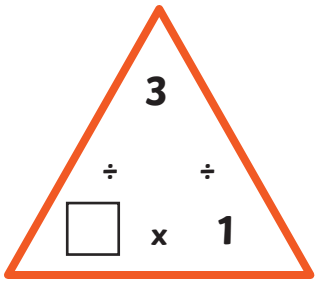
1. 

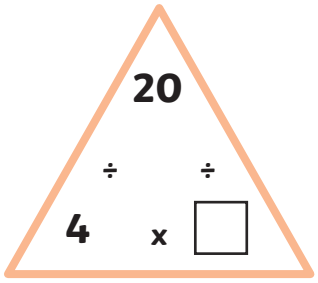
2. 

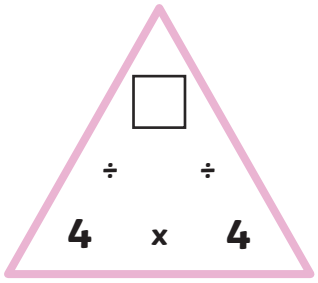
3. 

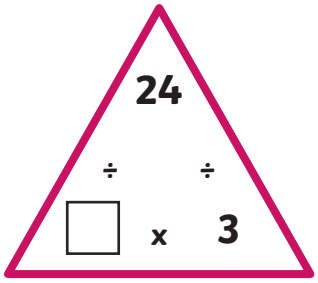
4. 

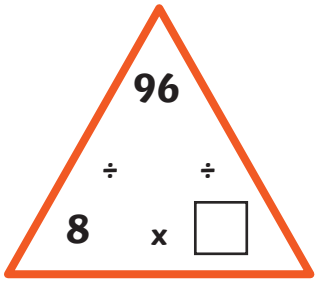
5. 

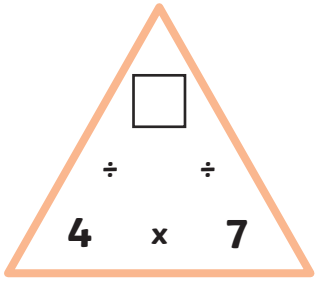
6. 

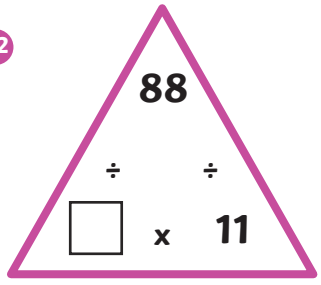
7. 

8. 

9. 

10. 

11. 

12. 

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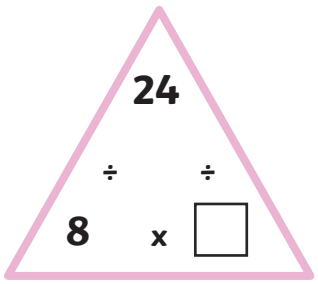
Multiplication Triangles Sheet 2

Fill in the blanks in these multiplication triangles.

13



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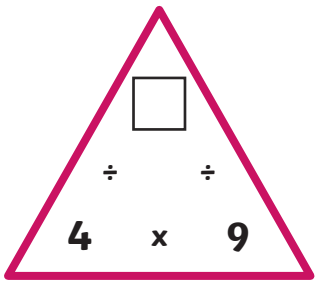

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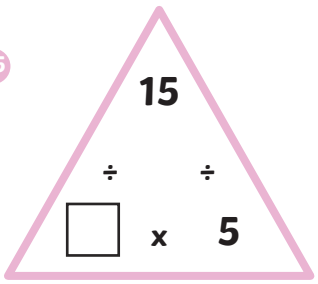

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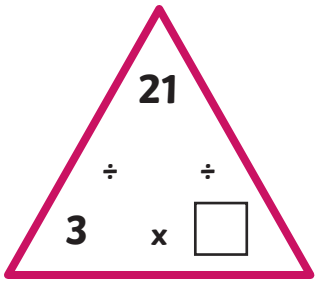

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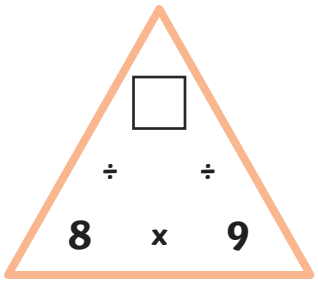

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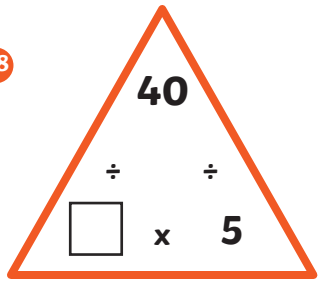

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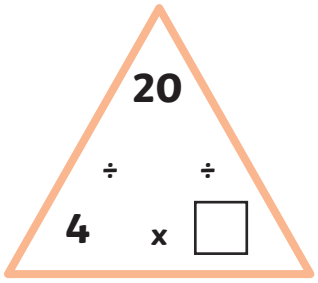

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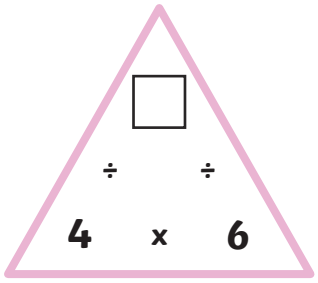

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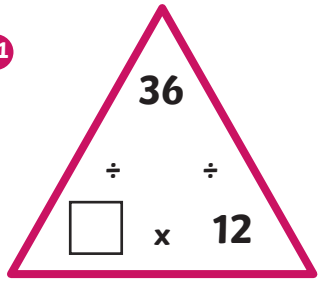

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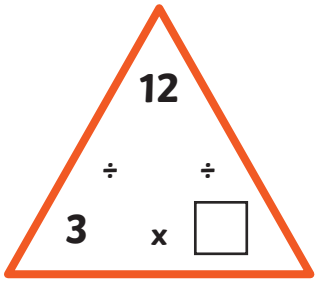

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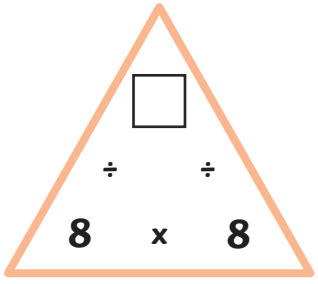

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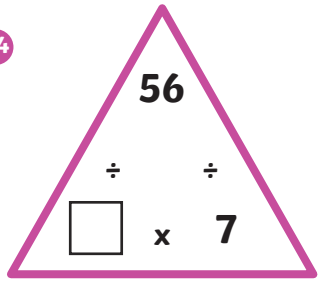

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Mental Multiplication

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

Times the number by 10 and then halve 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 =

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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		

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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 =

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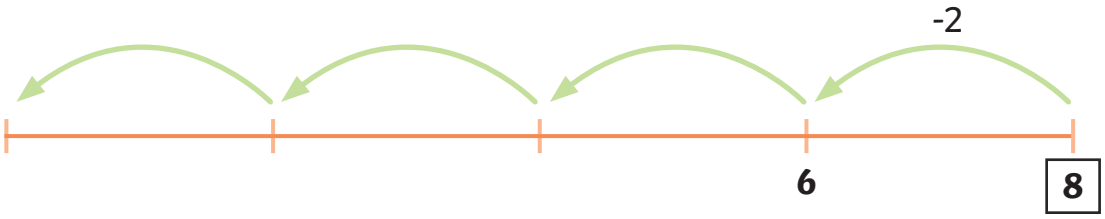
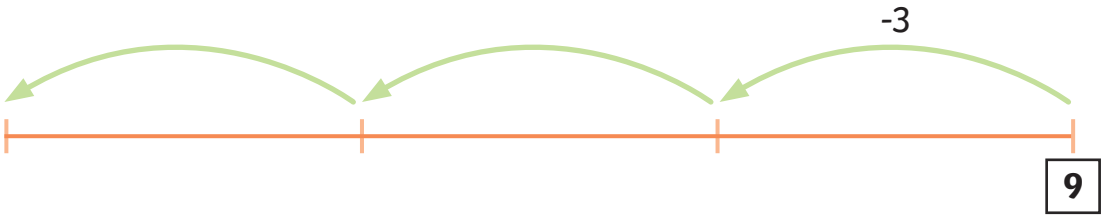
Division using a Numberline

1. $8 \div 2 =$



2. $9 \div 3 =$



3. $12 \div 4 =$

4. $12 \div 3 =$

5. $18 \div 3 =$

6. $18 \div 6 =$

7. $36 \div 3 =$

8. $48 \div 4 =$

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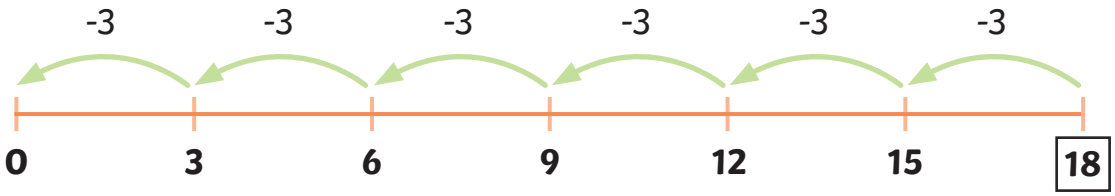
9 **18 ÷ 3 = 6**



10 **18 ÷ 6 =**

11 **28 ÷ 7 =**

12 **32 ÷ 8 =**

13 **42 ÷ 3 =**

14 **32 ÷ 4 =**

15 **52 ÷ 4 =**

16 **70 ÷ 5 =**

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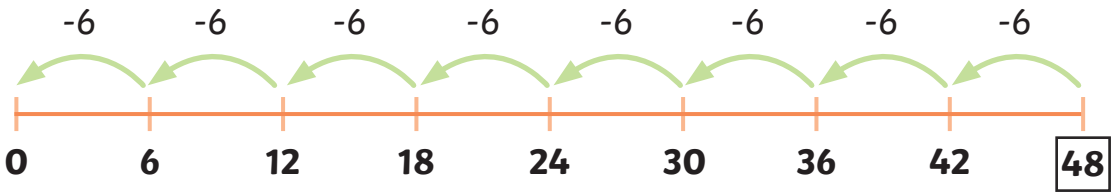
17 **48 ÷ 6 = 8**



18 **54 ÷ 6 =** ☐

19 **96 ÷ 8 =** ☐

20 **88 ÷ 8 =** ☐

21 **88 ÷ 4 =** ☐

22 **64 ÷ 8 =** ☐

23 **91 ÷ 7 =** ☐

24 **108 ÷ 9 =** ☐

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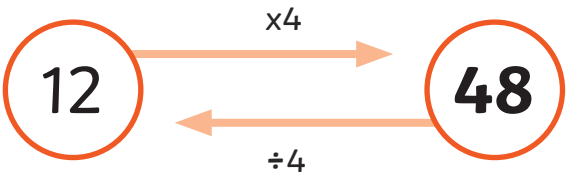
I'm Thinking of a Number

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

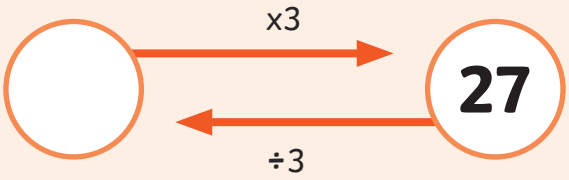
Example:

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

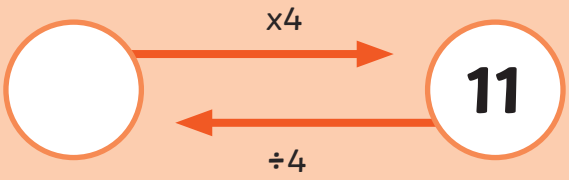


Questions:

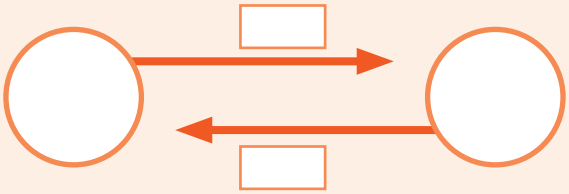
1. Nat is thinking of a number. He multiplies it by 3 and his new number is 27. What number was he first thinking of?



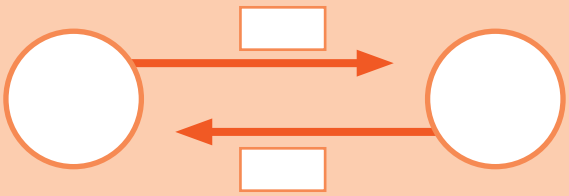
2. Shahid is thinking of a number. He divides it by 4 and his new number is 11. What number was he first thinking of?



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?

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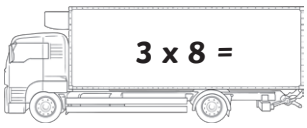
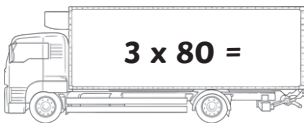
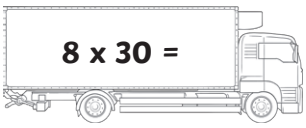
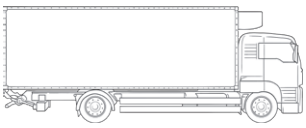
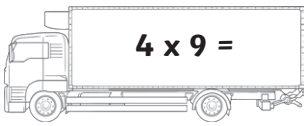
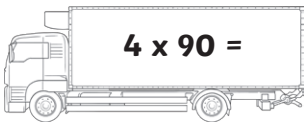
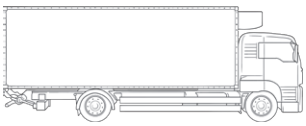
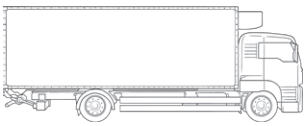
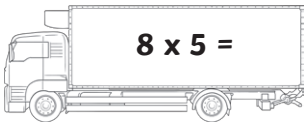
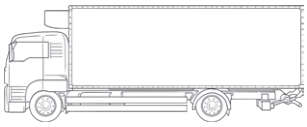
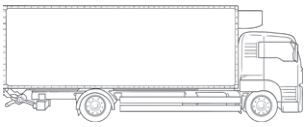
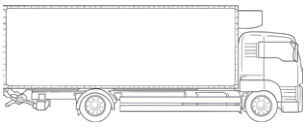
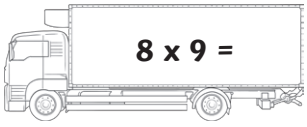
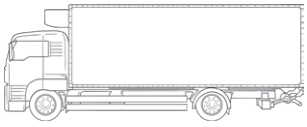
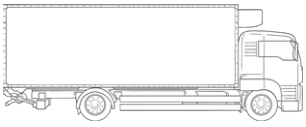
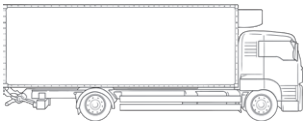
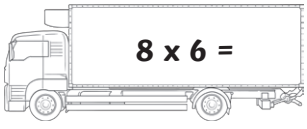
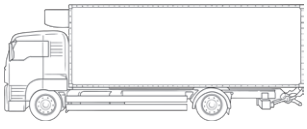
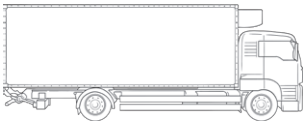
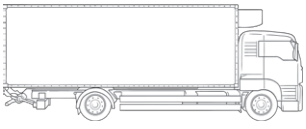
Deriving Related Multiplication Facts From Known Multiplication Tables

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 =			

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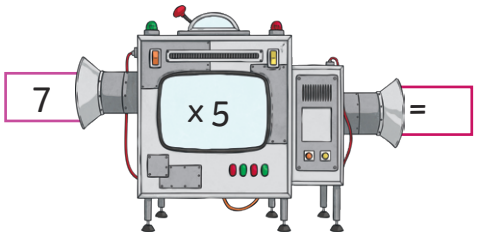

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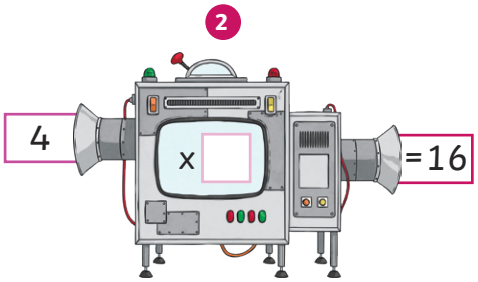

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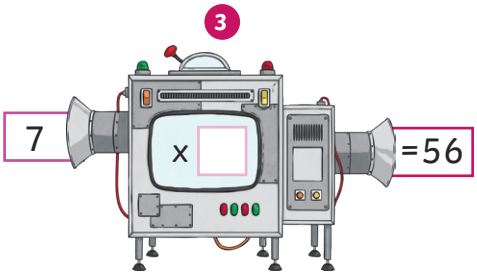

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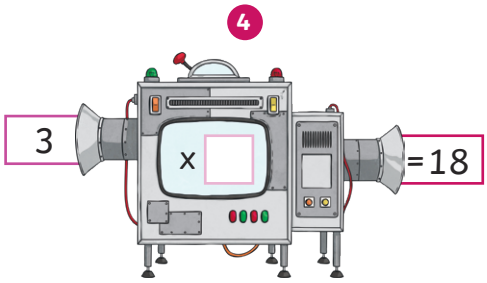

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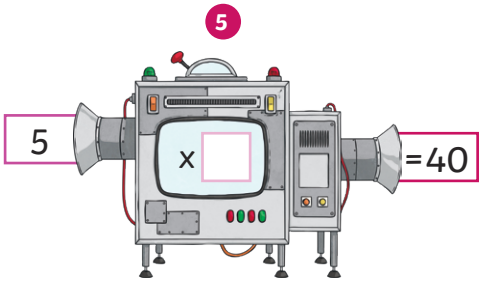

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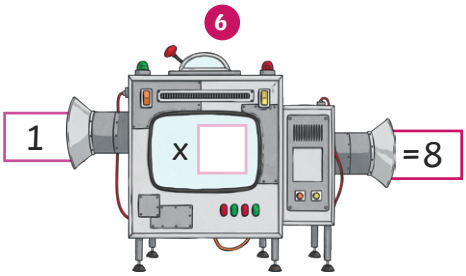

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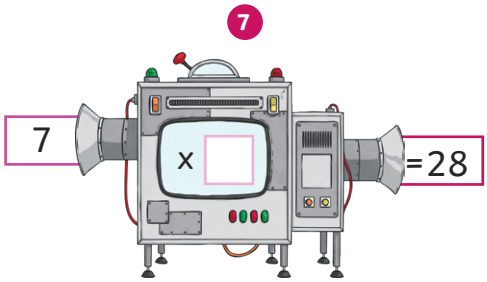

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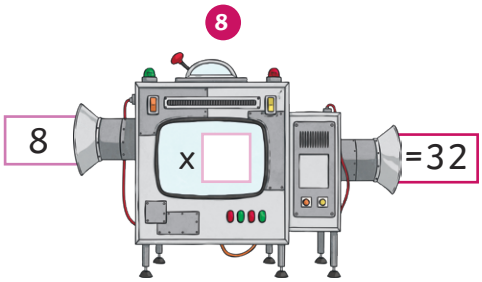

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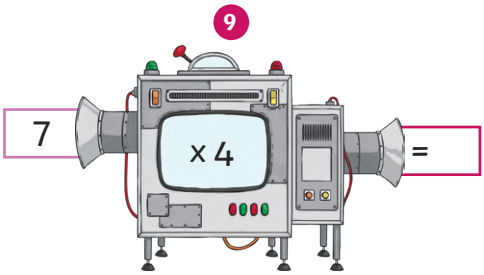

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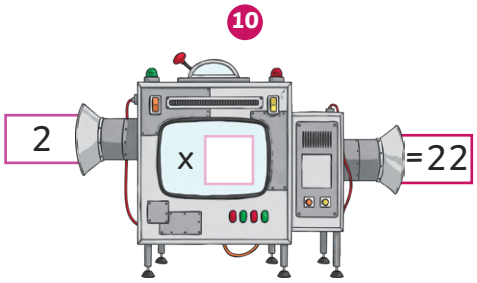

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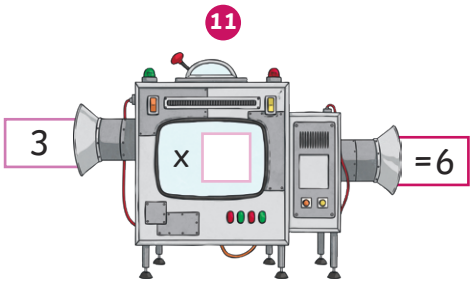

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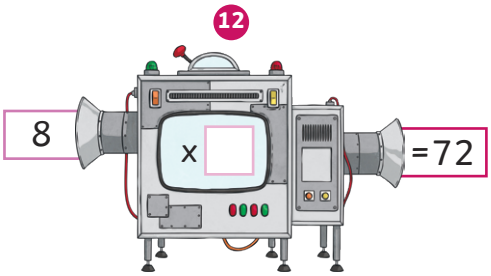

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Multiplication Missing Numbers

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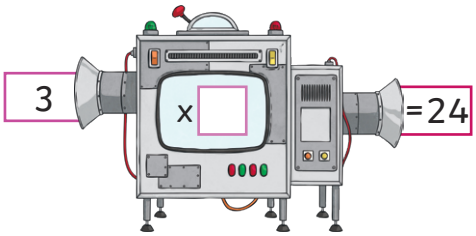

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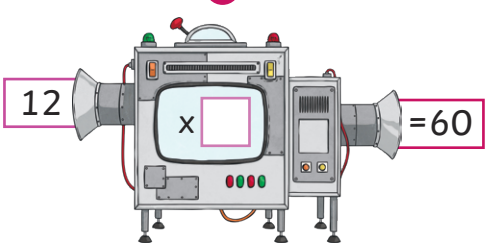

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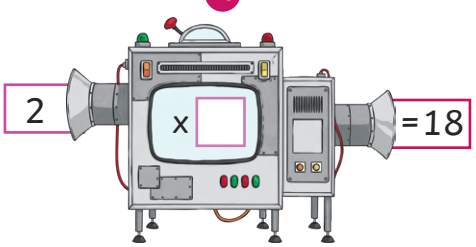

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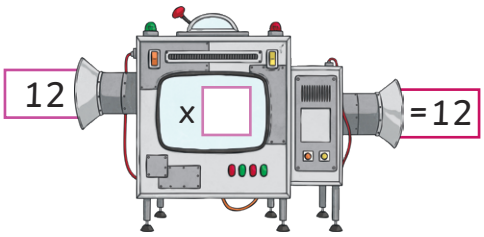

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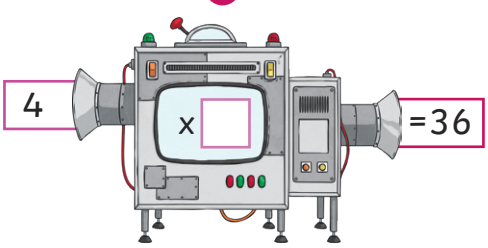

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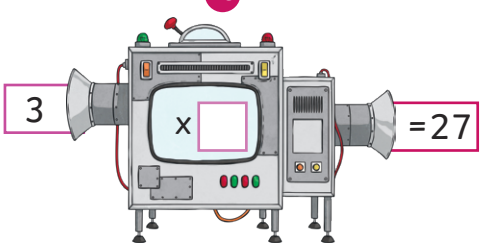

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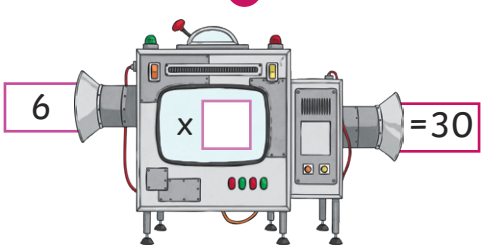

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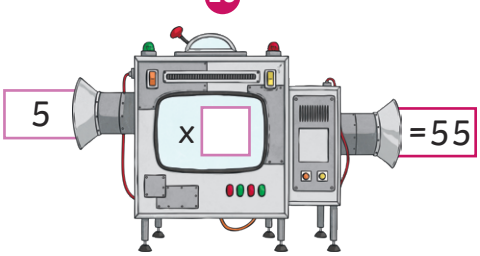

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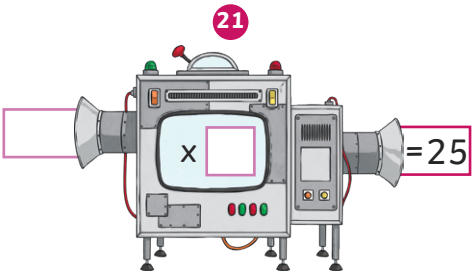

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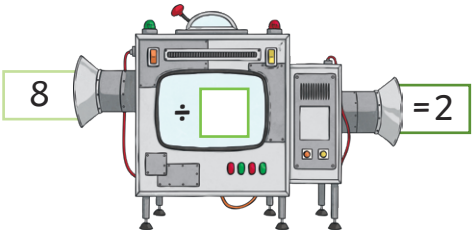

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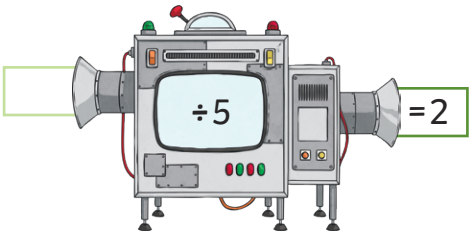

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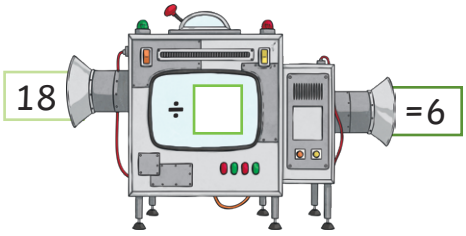

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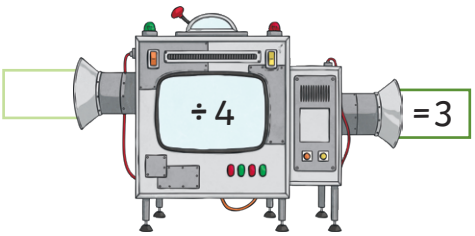

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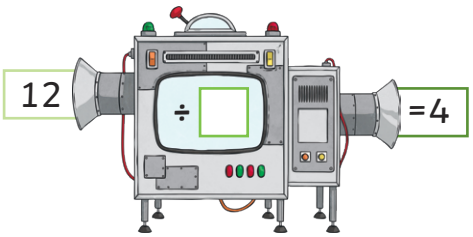

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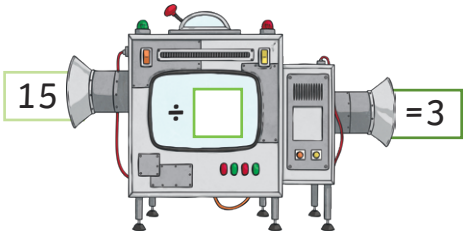

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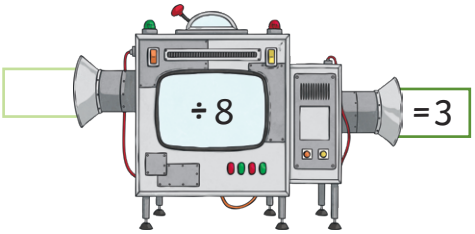

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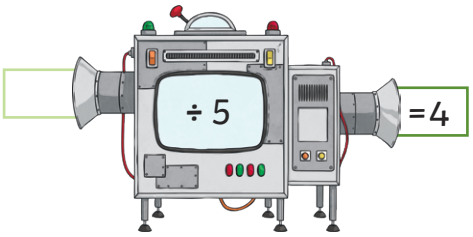

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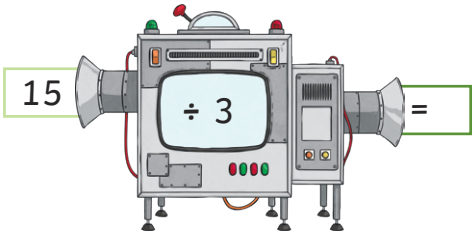

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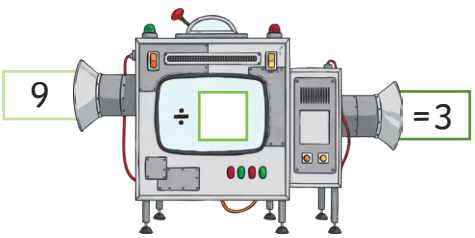

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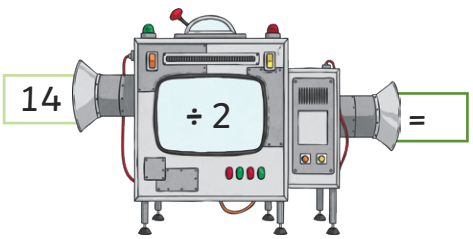

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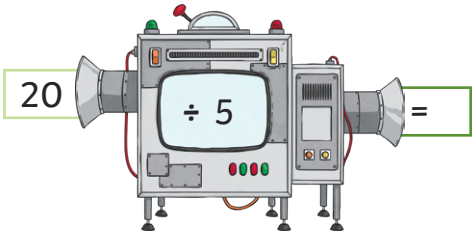

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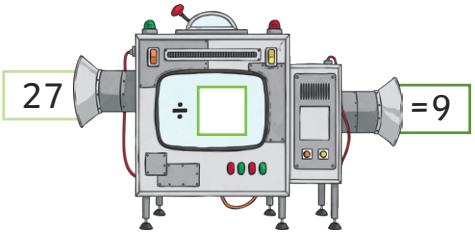

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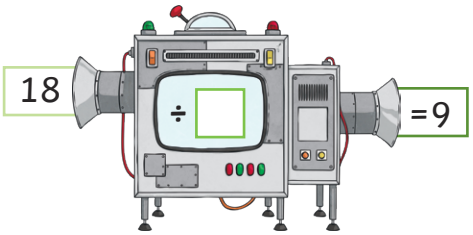

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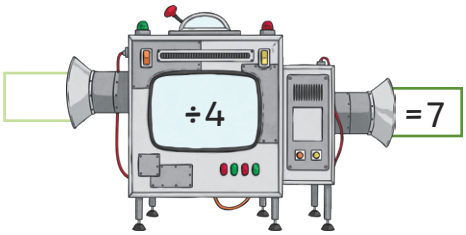

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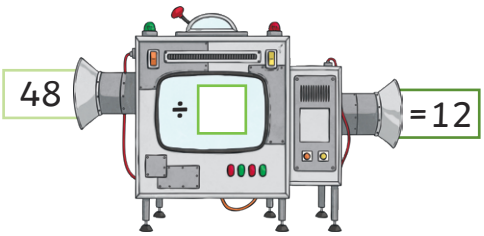

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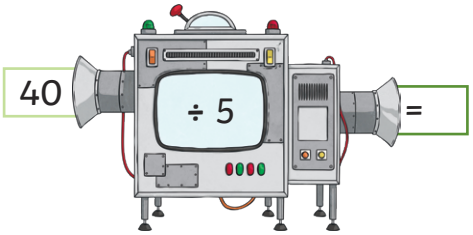

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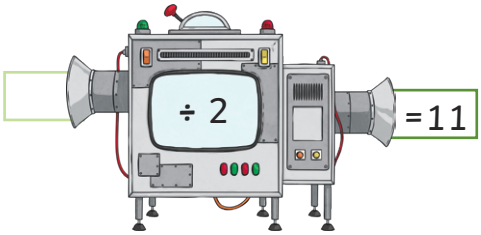

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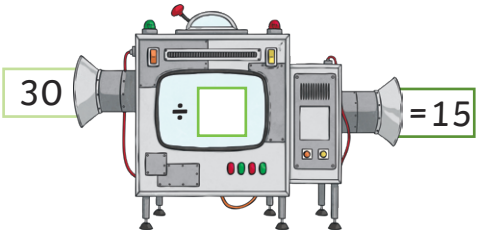

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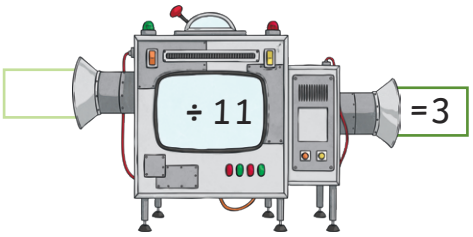

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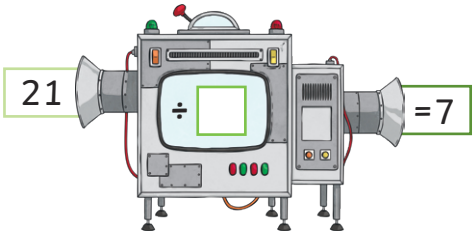

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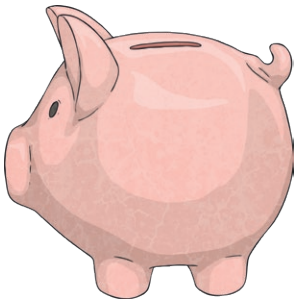
Scaling Problems

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?

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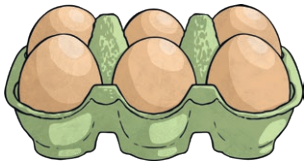
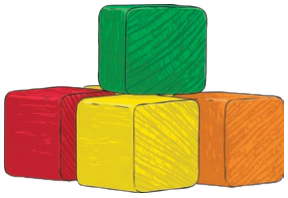
Scaling Problems

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?

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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