#### YEAR 3 ARITHMETIC PRACTICE TESTS

# Autumn Test 1

## Teacher guidance

#### Skills and knowledge needed for this test:

- Addition of three single-digit numbers
- Addition and subtraction of multiples of 10
- Addition and subtraction of a two-digit and a single-digit number with and without crossing a ten
- Addition and subtraction of a two-digit number and a multiple of 10



- Addition and subtraction of two two-digit numbers without crossing a ten
- Multiplication and division by 10, 5 and 2
- Finding a half, a third or a quarter of an amount

## Review: Missing number statements with addition and subtraction

#### A teaching suggestion

Look back to the methods of teaching missing number statements that were used in the Year 1 and Year 2 books.



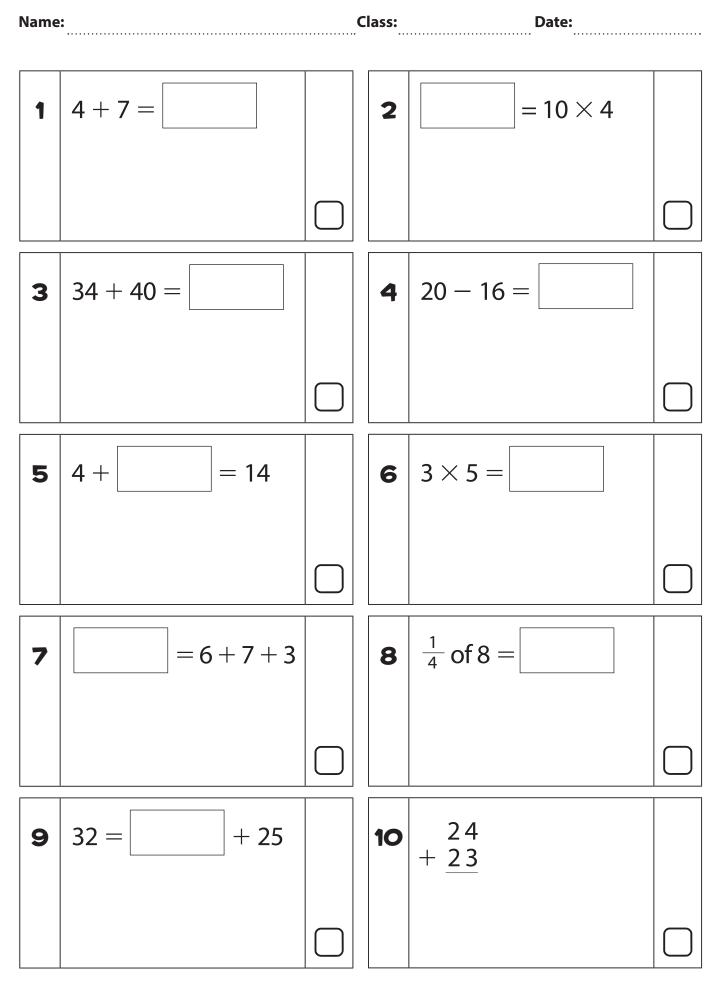
Play games where you show the children number statements where one number is missing. The children call out whether the missing number will be the biggest number in the number statement, or not the biggest.



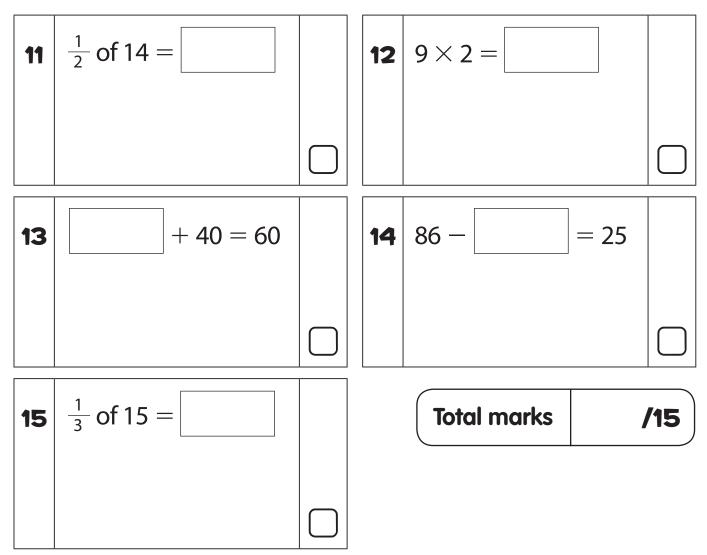
Explain that, to find the missing number, the children need to use the two numbers that are already given.

<sup>p</sup>4 If the missing number is the biggest number in the number statement, add the other two numbers. If it is not the biggest, subtract the other two numbers (making sure the bigger number is written first).

Question number	Question	Answer	Marks	Related test
1	4 + 7 =	11	1	Y1 Spring Test 2
2	$\square = 10 \times 4$	40	1	Y2 Autumn Test 2
3	34 + 40 =	74	1	Y2 Autumn Test 6
4	20 - 16 =	4	1	Y1 Summer Test 5
5	4 + = 14	10	1	Y3 Autumn Test 1, Y1 Summer Test 1
6	3 × 5 =	15	1	Y2 Spring Test 5
7	$\Box = 6 + 7 + 3$	16	1	Y2 Spring Test 6
8	$\frac{1}{4}$ of 8 =	2	1	Y2 Summer Test 1
9	32 = + 25	7	1	Y3 Autumn Test 1, Y2 Summer Test 4
10	24 + 23 =	47	1	Y2 Spring Test 4
11	$\frac{1}{2}$ of 14 =	7	1	Y2 Spring Test 2
12	9 × 2 =	18	1	Y2 Spring Test 1
13	+ 40 = 60	20	1	Y3 Autumn Test 1, Y2 Autumn Test 4
14	86 = 25	61	1	Y3 Autumn Test 1, Y2 Spring Test 4
15	$\frac{1}{3}$ of 15 =	5	1	Y2 Summer Test 5
	Total r	narks	15	



## Autumn Test 1 (continued)



### How well did you do?

+	1	3	7	10			
-	4	5	9	13	14		
0 + 0 + 0	7						
TO ± O or TO	3	4	5	9	10	13	14
Missing number statements	5	9	13	14			
X	2	6	12				
÷	8	11	15				
2x, 5x and 10x tables	2	6	11	12	15		
Fractions of an amount	8	11	15				

### **Teacher guidance**

#### Skills and knowledge needed for this test:

- Addition of three single-digit numbers
- Addition and subtraction of multiples of 10
- Addition and subtraction of a two-digit and a single-digit number with and without crossing a ten
- · Addition and subtraction of a two-digit number and a multiple of 10



- · Addition and subtraction of two two-digit numbers without crossing a ten
- · Missing number statements with addition and subtraction
- Multiplication and division by 10, 5 and 2
- Finding a half, a third or a guarter of an amount

### Review: Addition of two two-digit numbers with and without crossing a ten

#### A teaching suggestion



Start by adding 36 + 57 using the column method, adding the ones first. Discuss the problem of 6 + 7 = 13.

Agree that 13 is 10 + 3 and ask the children to talk about how they can write that in their calculation.

underneath the tens column as 1 (because it is 1 ten). Show how the written number still says 13 (not 31!) but with the 1 written in a different place.



Discuss how many tens there are to add together (3, 5 and 1) and that makes 9 tens, which is 90. Write the answer, emphasising that the 0 from the 90 is hidden behind the 3, giving an answer of 93.

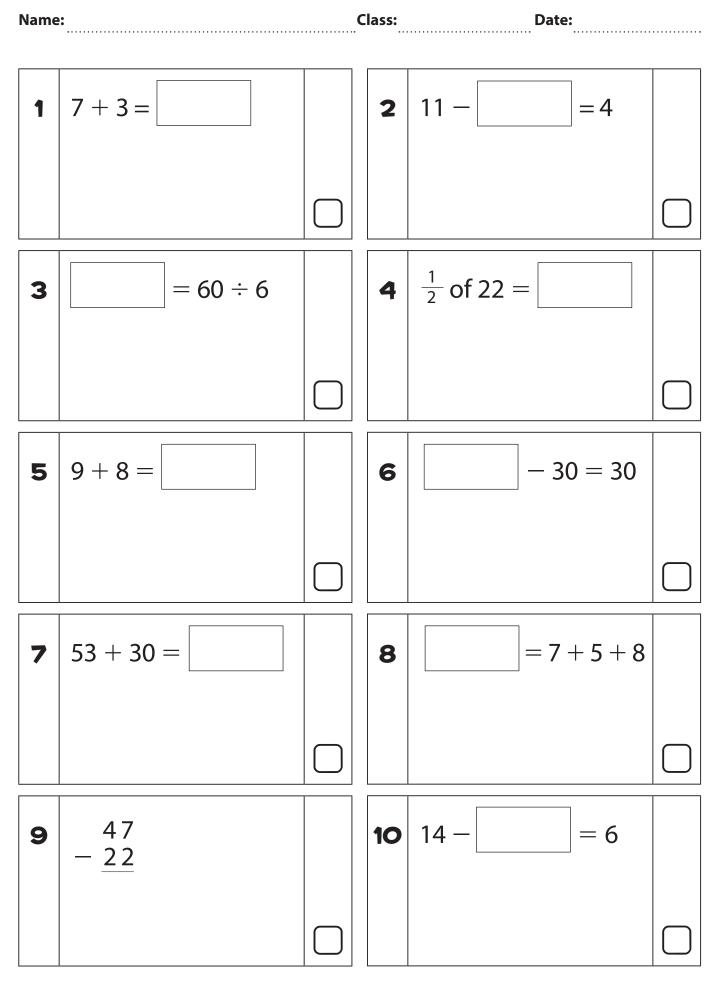
$$36 + 57 = \frac{57}{93}$$



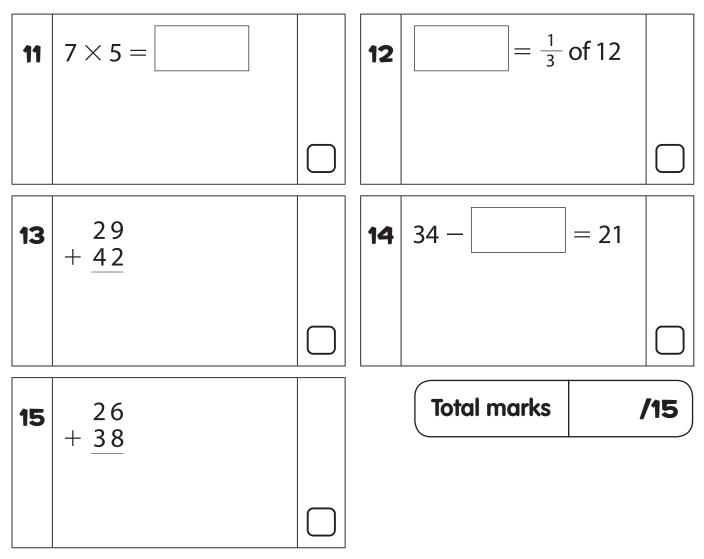
Show them that the 3 is written in the ones column and that the 10 is written

Complete lots of examples together and in groups before trying independent work.

Question number	Question	Answer	Marks	Related test
1	7 + 3 =	10	1	Y1 Autumn Test 6
2	11 - 🗌 = 4	7	1	Y3 Autumn Test 1, Y1 Spring Test 2
3	$\Box = 60 \div 6$	10	1	Y2 Autumn Test 3
4	$\frac{1}{2}$ of 22 =	11	1	Y2 Spring Test 2
5	9 + 8 =	17	1	Y1 Summer Test 3
6	-30 = 30	60	1	Y3 Autumn Test 1, Y3 Autumn Test 2
7	53 + 30 =	83	1	Y2 Spring Test 4
8	= 7 + 5 + 8	20	1	Y2 Spring Test 6
9	47 - 22 =	25	1	Y2 Spring Test 4
10	14 - 🗌 = 6	8	1	Y3 Autumn Test 1, Y1 Summer Test 1
11	7×5=	35	1	Y2 Spring Test 5
12	$=\frac{1}{3}$ of 12	4	1	Y2 Summer Test 5
13	29 + 42 =	71	1	Y3 Autumn Test 2
14	34 - = 21	13	1	Y3 Autumn Test 1, Y2 Spring Test 4
15	26 + 38 =	64	1	Y3 Autumn Test 2
	Total	marks	15	



## Autumn Test 2 (continued)



## How well did you do? Colour the numbers of the

questions you got correct.

+	1	5	6	7	8	13	15
-	2	9	10	14			
0 + 0 + 0	8						
TO±O	2	10					
TO ± TO	6	7	9	14			
TO + TO with carrying	13	15					
Missing number statements	2	6	10	14			
x	11						
÷	3	4	12				
2x, 5x and 10x tables	3	4	11				
Fractions of an amount	4	12					

#### YEAR 3 ARITHMETIC PRACTICE TESTS

# Autumn Test 3

## Teacher guidance

#### Skills and knowledge needed for this test:

- Addition of three single-digit numbers
- Addition and subtraction of multiples of 10
- Addition and subtraction of a two-digit and a single-digit number with and without crossing a ten
- Addition and subtraction of a two-digit number and a multiple of 10



- Addition and subtraction of two two-digit numbers without crossing a ten
- Addition of two two-digit numbers crossing a ten
- Missing number statements with addition and subtraction
- Multiplication and division by 10, 5 and 2
- Finding a half, a third or a quarter of an amount

### Review: Subtraction of two two-digit numbers with and without crossing a ten

#### A teaching suggestion

Explain the children are going to play the 'Pirate Game'. Display the number 70 and explain that this is all the treasure they have. Select two children and give one seven cards with '10' written on each. Establish that this child is holding 70. Do not give the other child any cards, but explain they are there to hold the 'ones'. Select a third child to be the pirate and give them an eye-patch (optional!).

Underneath the 70 write '- 28' and say this is the payment the pirate is demanding. The pirate asks the 'ones' child for 8 and is told he cannot pay. The pirate menaces the 'ones' child who whispers to the 'tens' child: 'Lend me some treasure'. The 'tens' child responds: 'Alright, but I'm only giving you one!' and gives one of the tens cards to the 'ones' child, who immediately swaps it for 10 ones, as 'ones' children cannot hold tens!

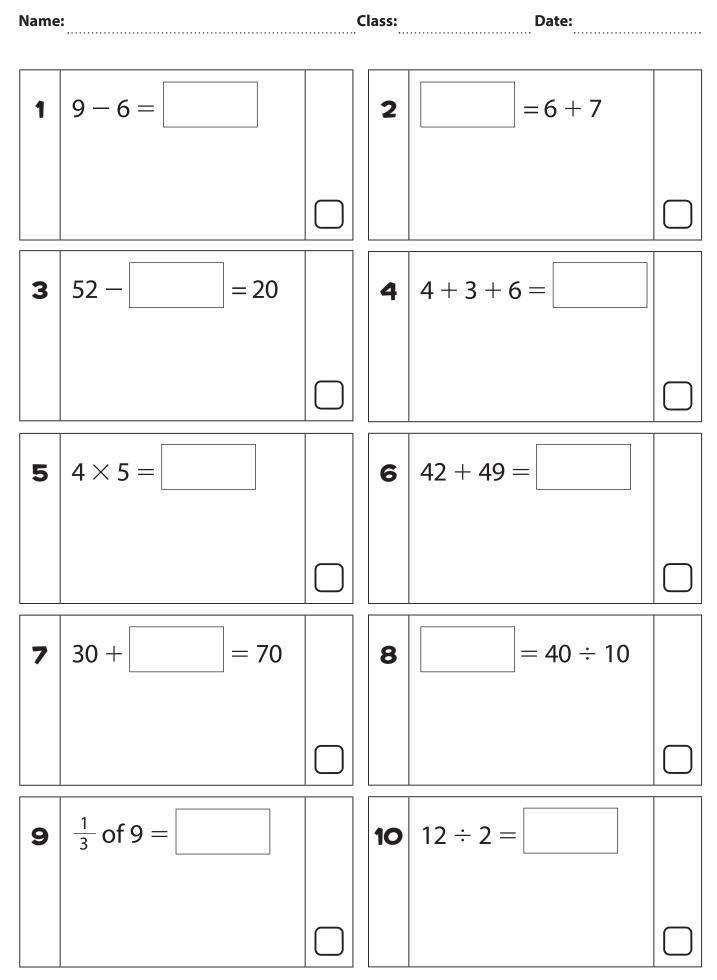
°3	Alter the displayed calculation as	s shown
	because the 'tens' child is now	6 A
	only holding 6 tens while the	6∕ <b>7</b> ¹0
	'ones' child is holding 10 ones.	- 28

4	The pirate again demands 8 ones a	and is
	paid, leaving the 'ones' child with 2	ones.
	He then demands two cards from t	the 'tens'
	child to get his payment of 28,	67 10
	leaving the 'tens' child with 4	- 2 8
	tens. Finish the calculation as	4 2
	shown.	12

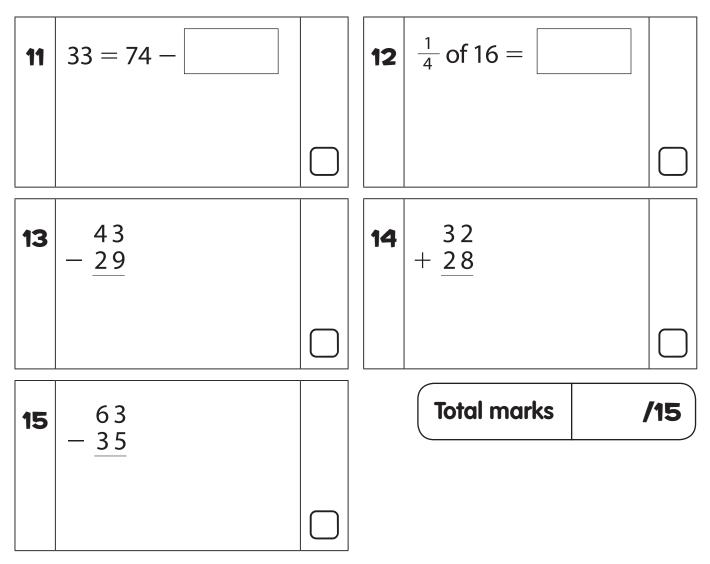
Step 5

Play the game again with different subtractions. Allow the children to be dramatic!

Question number	Question	Answer	Marks	Related test
1	9 - 6 =	3	1	Y1 Autumn Test 5
2	= 6 + 7	13	1	Y1 Summer Test 1
3	52 - 🗌 = 20	32	1	Y3 Autumn Test 1, Y2 Autumn Test 6
4	4 + 3 + 6 =	13	1	Y2 Spring Test 6
5	4 × 5 =	20	1	Y2 Spring Test 5
6	42 + 49 =	91	1	Y3 Autumn Test 2
7	30 + = 70	40	1	Y3 Autumn Test 1, Y2 Autumn Test 4
8	= 40 ÷ 10	4	1	Y2 Autumn Test 3
9	$\frac{1}{3}$ of 9 =	3	1	Y2 Summer Test 5
10	12 ÷ 2 =	6	1	Y2 Spring Test 1
11	33 = 74 -	41	1	Y3 Autumn Test 1, Y3 Autumn Test 3
12	$\frac{1}{4}$ of 16 =	4	1	Y2 Summer Test 1
13	43 - 29 =	14	1	Y3 Autumn Test 3
14	32 + 28 =	60	1	Y3 Autumn Test 2
15	63 - 35 =	28	1	Y3 Autumn Test 3
	Tota	l marks	15	



## Autumn Test 3 (continued)



## How well did you do? Colour the numbers of the

questions you got correct.

TO ± TO without crossing a ten	3	7	11			
TO + TO crossing a ten	6	14				
TO – TO crossing a ten	13	15				
2x, 5x and 10x tables	5	8	10			
Fractions of an amount	9	12				
Missing number statements	3	7	11			
+	2	4	6	14		
-	1	3	7	11	13	15
x	5	8	9	12		
÷	8	9	10	12		

### Teacher guidance

#### Skills and knowledge needed for this test:

- Addition of three single-digit numbers
- Addition and subtraction of multiples of 10
- Addition and subtraction of a two-digit and a single-digit number with and without crossing a ten
- Addition and subtraction of a two-digit number and a multiple of 10



- Addition and subtraction of two two-digit numbers with and without crossing a ten
- Missing number statements with addition and subtraction
- Multiplication and division by 10, 5 and 2

that the answer is 6.

• Finding a half, a third or a quarter of an amount

## Review: Finding two quarters and three quarters of an amount

#### A teaching suggestion



Ask four children to split a collection of 12 books equally between them. Use the term 'quarter' (e.g. 'Can you share the books so that you each have one quarter of the books?').



Agree that each child has three books, so a quarter of 12 is 3. With each child in turn say: 'This quarter is worth 3.' Put two of the children together and ask: 'What are two quarters of 12 worth?'. Agree



Put three of the children together and ask: 'What are three quarters of 12 worth?'. Agree that the answer is 9.



Repeat with other multiples of 4.

Step 6

Use this activity to find two quarters and a half of the same amount and to establish that  $\frac{2}{4}$  is the same as  $\frac{1}{2}$ .

Question number	Question	Answer	Marks	Related test
1	□ = 7 − 4	3	1	Y1 Autumn Test 4
2	2 × 5 =	10	1	Y2 Spring Test 5
3	11 + 3 =	14	1	Y1 Summer Test 1
4	50 - = 10	40	1	Y3 Autumn Test 1, Y3 Autumn Test 3
5	= 9 × 10	90	1	Y2 Autumn Test 2
6	9+6+1=	16	1	Y2 Spring Test 6
7	43 + = 51	8	1	Y3 Autumn Test 1, Y3 Autumn Test 3
8	$\frac{1}{2}$ of 10 =	5	1	Y2 Spring Test 2
9	73 = 23	50	1	Y3 Autumn Test 1, Y3 Autumn Test 3
10	44 + 36 =	80	1	Y3 Autumn Test 2
11	$\frac{1}{3}$ of 3 =	1	1	Y2 Summer Test 5
12	16÷2=	8	1	Y2 Spring Test 1
13	$\frac{2}{4}$ of 8 =	4	1	Y3 Autumn Test 4
14	74 - 29 =	45	1	Y3 Autumn Test 3
15	$=\frac{3}{4}$ of 20	15	1	Y3 Autumn Test 4
	Total	marks	15	

#### YEAR 3 ARITHMETIC PRACTICE TESTS

# Autumn Test 5

### **Teacher guidance**

#### Skills and knowledge needed for this test:

- Addition of three single-digit numbers
- Addition and subtraction of multiples of 10
- Addition and subtraction of a two-digit and a single-digit number with and without crossing a ten
- Addition and subtraction of a two-digit number and a multiple of 10



- Addition and subtraction of two two-digit numbers with and without crossing a ten
- Missing number statements with addition and subtraction
- Multiplication and division by 10, 5 and 2
- Finding a half, a third, a quarter, two quarters or three quarters of an amount

### New: Missing number statements with multiplication and division

#### A teaching suggestion



Play games where you show the children number statements with one number missing. The children call out whether the missing number will be the biggest number in the number statement, or not the biggest.



If the missing number is the biggest number in the number statement, multiply the other two numbers. If it is not the biggest, divide the larger number by the smaller.



Explain that, to find the missing number, the children need to use the two numbers already given.

Question number	Question	Answer	Marks	Related test
1	5 + 8 =	13	1	Y1 Summer Test 1
2	20 = 12	8	1	Y3 Autumn Test 1, Y1 Summer Test 5
3	$\frac{1}{4}$ of 20 =	5	1	Y2 Summer Test 1
4	100 = 🗌 + 60	40	1	Y3 Autumn Test 1, Y2 Autumn Test 4
5	15 ÷ 🗌 = 5	3	1	Y3 Autumn Test 5
6	= 35 + 57	92	1	Y3 Autumn Test 2
7	$\frac{2}{4}$ of 28 =	14	1	Y3 Autumn Test 4
8	75 - 41 =	34	1	Y3 Autumn Test 3
9	$\Box \div 5 = 9$	45	1	Y3 Autumn Test 5
10	67 - 49 =	18	1	Y3 Autumn Test 3
11	$\frac{3}{4}$ of 44 =	33	1	Y3 Autumn Test 4
12	56 + 28 =	84	1	Y3 Autumn Test 2
13	56 = 25	81	1	Y3 Autumn Test 1, Y3 Autumn Test 2
14	60 = 🗌 × 5	12	1	Y3 Autumn Test 5
15	70 - 37 =	33	1	Y3 Autumn Test 3
	Total	marks	15	

### Teacher guidance

#### Skills and knowledge needed for this test:

- Addition of three single-digit numbers
- Addition and subtraction of multiples of 10
- Addition and subtraction of a two-digit and a single-digit number with and without crossing a ten
- Addition and subtraction of a two-digit number and a multiple of 10



- Addition and subtraction of two two-digit numbers with and without crossing a ten
- Missing number statements with all four operations
- Multiplication and division by 10, 5 and 2
- Finding a half, a third, a quarter, two quarters or three quarters of an amount

### New: Addition and subtraction of a three-digit number and a single-digit number or a multiple of 10

## A suggestion for teaching addition and subtraction of a three-digit and a single-digit number



Display a number line from 380 to 410. Select a starting number and count on or back by a single-digit number. Compare this to using number bonds to 10 to calculate. Discuss which method the children find the quickest.

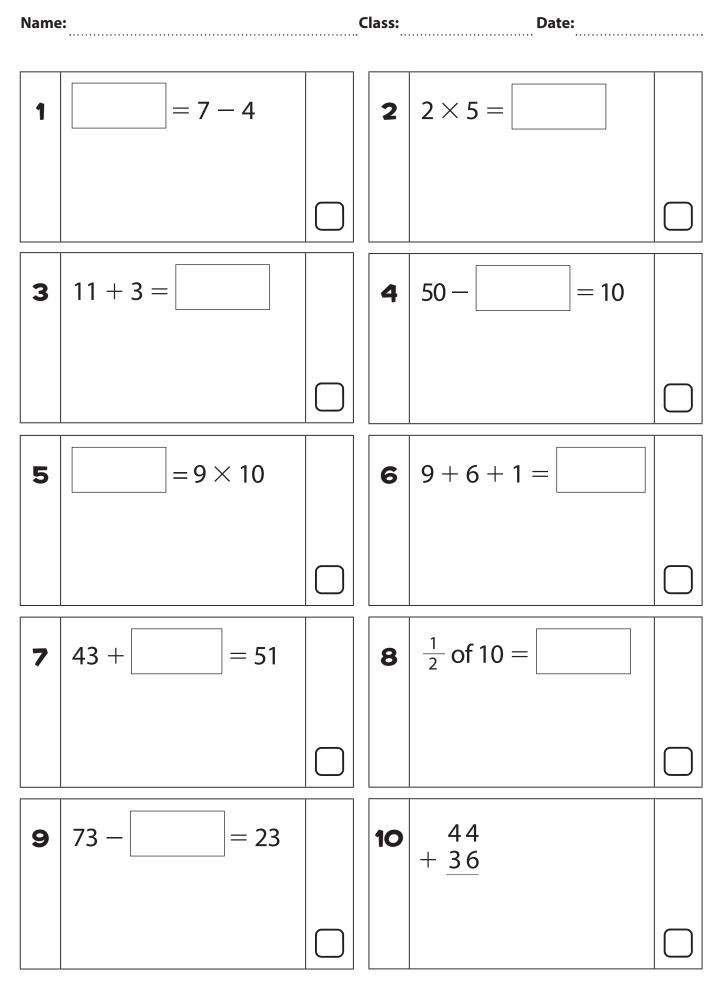
Ask the children to visualise a number line and count on or back by a single-digit number. Encourage them to use their knowledge of number bonds to 10 and multiples of 10 to check their answers. Repeat the calculations using knowledge of number bonds to 10 to calculate the answers.

## A suggestion for teaching addition and subtraction of a three-digit number and a multiple of 10

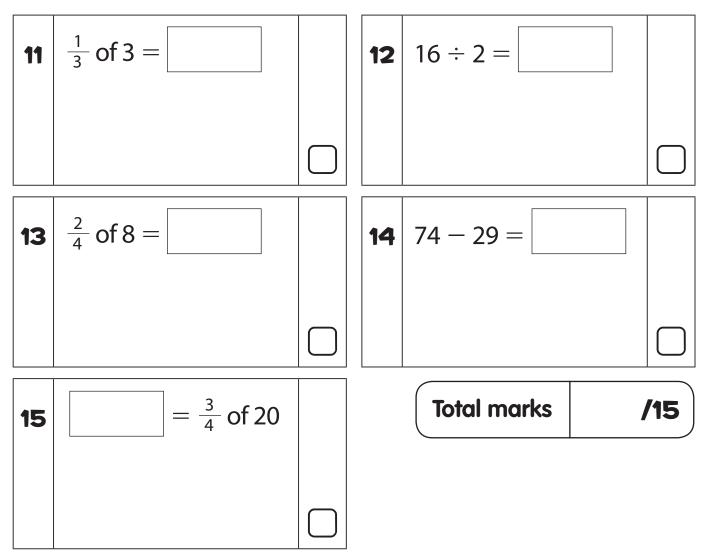
Ask the children lots of questions about the value of each digit in various three-digit numbers.

Focus on the tens digit and ask what the numbers would be if you had one more or one less ten. Discuss which digit in the number changes and why. Give the children lots of practice! Show the written calculations vertically, emphasising the importance of lining up the columns correctly. More able children could try this independently.

Question number	Question	Answer	Marks	Related test
1	5 + 6 =	11	1	Y1 Spring Test 2
2	3 × 10 =	30	1	Y2 Autumn Test 2
3	= 40 +50	90	1	Y3 Autumn Test 2
4	15 - 9 =	6	1	Y1 Summer Test 1
5	2 × 🗌 = 12	6	1	Y3 Autumn Test 5, Y2 Spring Test 1
6	-+20 = 48	28	1	Y3 Autumn Test 1, Y3 Autumn Test 3
7	7 + 7 + 3 =	17	1	Y2 Spring Test 6
8	-8 = 23	31	1	Y3 Autumn Test 1, Y2 Spring Test 3
9	345 + 6 =	351	1	Y3 Autumn Test 6
10	326 + _ = 376	50	1	Y3 Autumn Test 1, Y3 Autumn Test 6
11	40 ÷ 5 =	8	1	Y2 Spring Test 5
12	$\frac{1}{3}$ of 21 =	7	1	Y2 Summer Test 5
13	36 + 46 =	82	1	Y3 Autumn Test 2
14	72 - 24 =	48	1	Y3 Autumn Test 3
15	$\frac{3}{4}$ of 40 =	30	1	Y3 Autumn Test 4
	Total	marks	15	

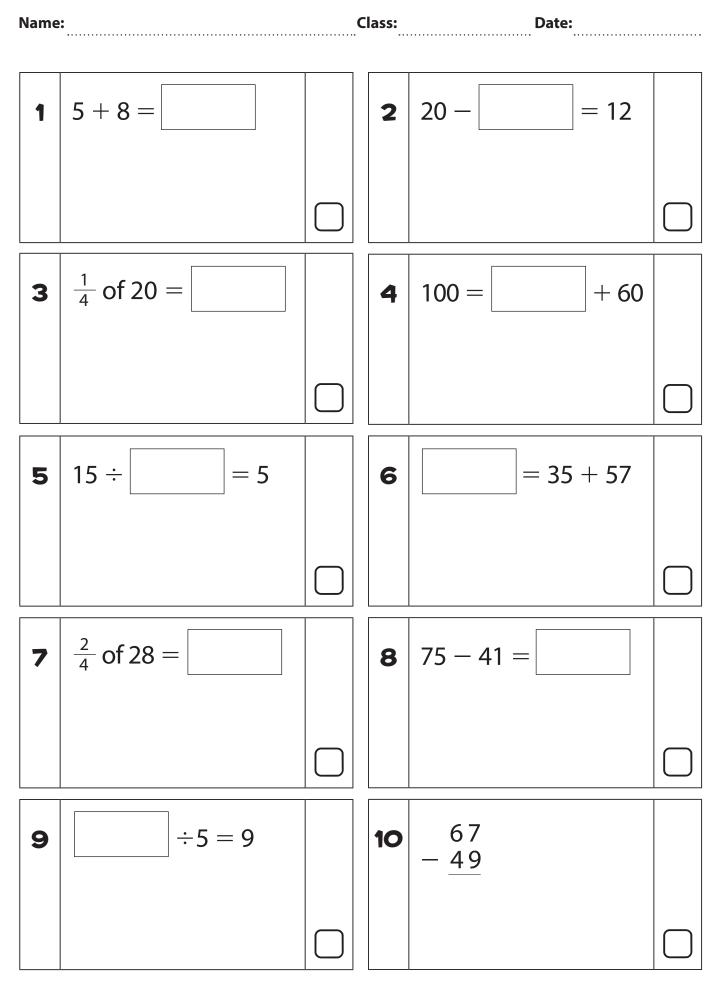


## Autumn Test 4 (continued)

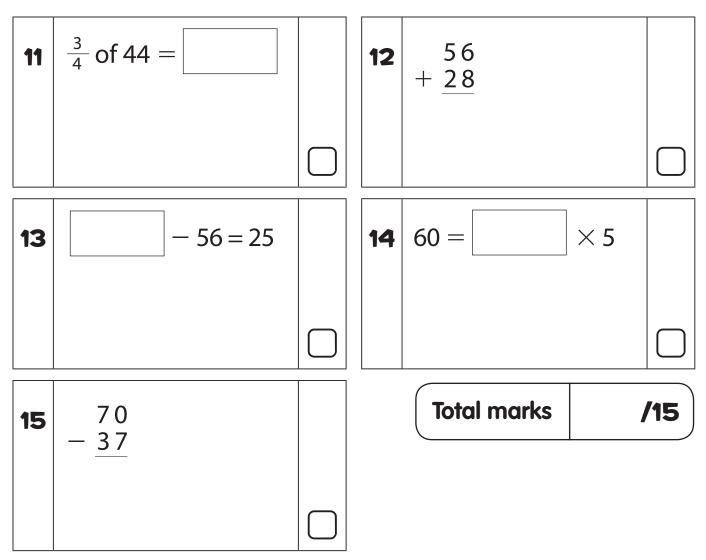


#### How well did you do? Colour the numbers of the

TO $\pm$ TO without crossing a ten	4	9			
TO±O	3	7			
TO + TO crossing a ten	10				
TO – TO crossing a ten	7	14			
2x, 5x and 10x tables	2	5	8	12	
Fractions of an amount	8	11	13	15	
Missing number statements	4	7	9		
+	3	6	10		
-	1	4	7	9	14
x	2	5	13	15	
÷	8	11	12	13	15

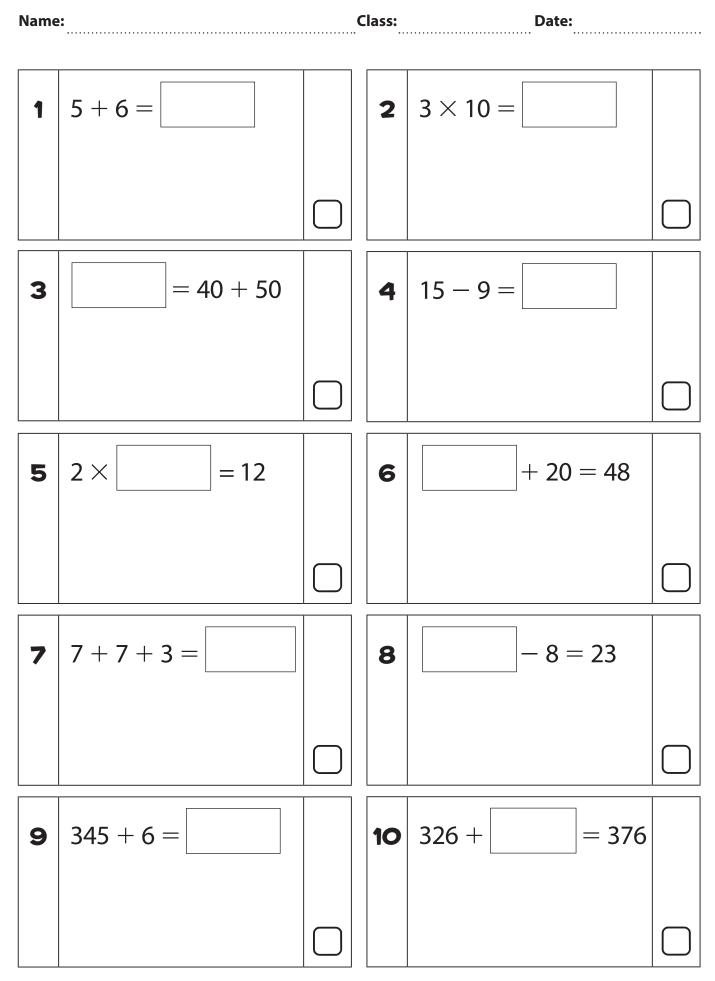


## Autumn Test 5 (continued)

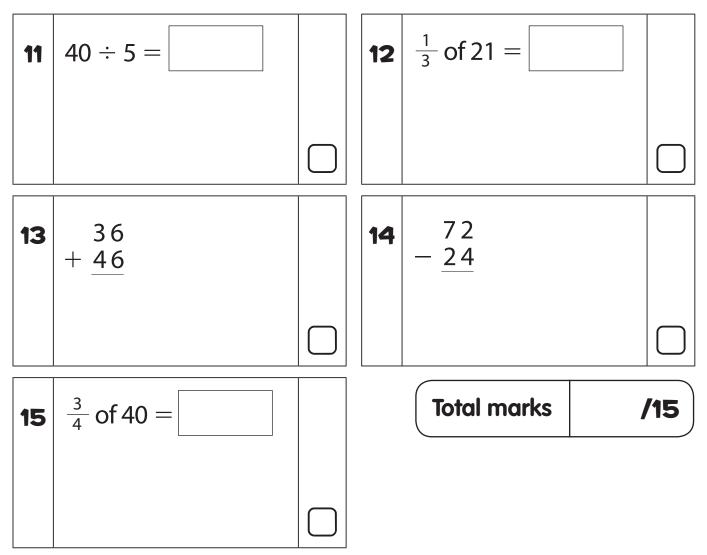


### How well did you do? Colour the numbers of the

± without crossing a ten	4	8				
+ crossing a ten	6	12	13			
– crossing a ten	10	15				
2x, 5x and 10x tables	5	9	14			
Fractions of an amount	3	7	11			
Missing number statements	2	4	5	9	13	14
+	1	6	12	13		
-	2	4	8	10	15	
x	3	7	9	11		
÷	3	5	7	11	14	



## Autumn Test 6 (continued)



### How well did you do?

± without crossing a ten	3	6	10			
+ crossing a ten	8	9	13			
– crossing a ten	4	14				
2x, 5x and 10x tables	2	5	11			
Fractions of an amount	12	15				
Missing number statements	5	6	8	10		
+	1	3	7	8	9	13
-	4	6	10	14		
x	2	15				
÷	5	11	12	15		

#### YEAR 3 ARITHMETIC PRACTICE TESTS

# Spring Test 1

### **Teacher guidance**

#### Skills and knowledge needed for this test:

- · Addition of three single-digit numbers
- Addition and subtraction of multiples of 10
- Addition and subtraction of a two-digit or a three-digit number and a single-digit number with and without crossing a ten
- · Addition and subtraction of a two-digit number and a multiple of 10

## New: The three times table

#### A teaching suggestion



Count in threes, both forwards and backwards, using a number line and circling the numbers.



Repeat the exercise, circling the numbers on a number square. Challenge the children to spot a pattern in the circled numbers.

Play the game 'Buzz'. The children stand in a circle and take turns counting from 1, but every time they come to a multiple of 3 they say 'buzz' instead of the number (e.g. 1, 2, buzz, 4, 5, buzz, 7 and so on, round the circle). · Addition and subtraction of two two-digit numbers with and without crossing a ten

- Missing number statements with all four operations
- Multiplication and division by 10, 5 and 2
- Finding a half, a third, a guarter, two guarters or three quarters of an amount



Sing or rap the three times table.

Use call and response games for multiplication fact recall, for example: '3  $\times$  7 you know it well, 3  $\times$  7 you've got to tell.' (Children shout: 'lt's 21!')



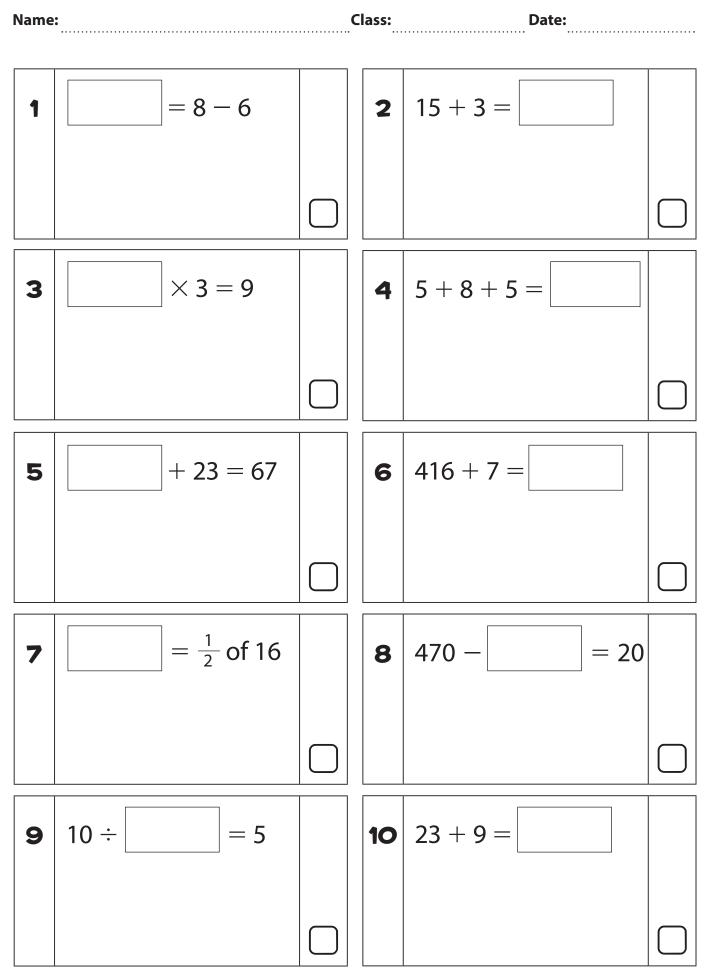
Use call and response games for division fact recall, for example: '30 can be made with threes. How many threes? Well, you tell me.' (Children shout: 'It's 10!')



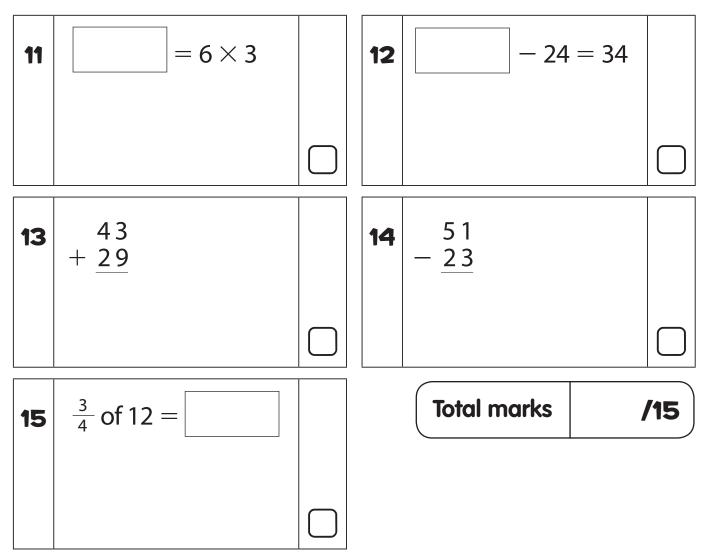
When the children are competent, mix up questions about different tables.

Question number	Question	Answer	Marks	Related test
1	□ = 8 − 6	2	1	Y1 Autumn Test 5
2	15 + 3 =	18	1	Y1 Summer Test 4
3	$\square \times 3 = 9$	3	1	Y3 Autumn Test 5, Y3 Spring Test 1
4	5 + 8 + 5 =	18	1	Y2 Spring Test 6
5	+ 23 = 67	44	1	Y3 Autumn Test 1, Y3 Autumn Test 3
6	416 + 7 =	423	1	Y3 Autumn Test 6
7	$\Box = \frac{1}{2} \text{ of } 16$	8	1	Y2 Spring Test 2
8	470 = 20	450	1	Y3 Autumn Test 1, Y3 Autumn Test 6
9	10 ÷ 🗌 = 5	2	1	Y3 Autumn Test 5, Y2 Spring Test 5
10	23 + 9 =	32	1	Y2 Spring Test 3
11	$\Box = 6 \times 3$	18	1	Y3 Spring Test 1
12	-24 = 34	58	1	Y3 Autumn Test 1, Y3 Autumn Test 2
13	43 + 29 =	72	1	Y3 Autumn Test 2
14	51 - 23 =	28	1	Y3 Autumn Test 3
15	$\frac{3}{4}$ of 12 =	9	1	Y3 Autumn Test 4
	Total	marks	15	





## Spring Test 1 (continued)



### How well did you do? Colour the numbers of the

± without crossing a ten	1	2	5	8	12	
+ crossing a ten	6	10	13			
– crossing a ten	14					
2x, 5x and 10x tables	7	9				
3x table	3	11	15			
Fractions of an amount	7	15				
Missing number statements	3	5	8	9	12	
+	2	4	6	10	12	13
-	1	5	8	14		
х	11	15				
÷	3	7	9	15		

### Teacher guidance

#### Skills and knowledge needed for this test:

- Addition of three single-digit numbers
- Addition and subtraction of multiples of 10
- Addition and subtraction of a two-digit or a three-digit number and a single-digit number with and without crossing a ten
- Addition and subtraction of a two-digit number and a multiple of 10

## New: Tables of multiples of 10

#### A teaching suggestion



Review the tables (e.g. the five times table).

Use objects to make groups of five, for example:

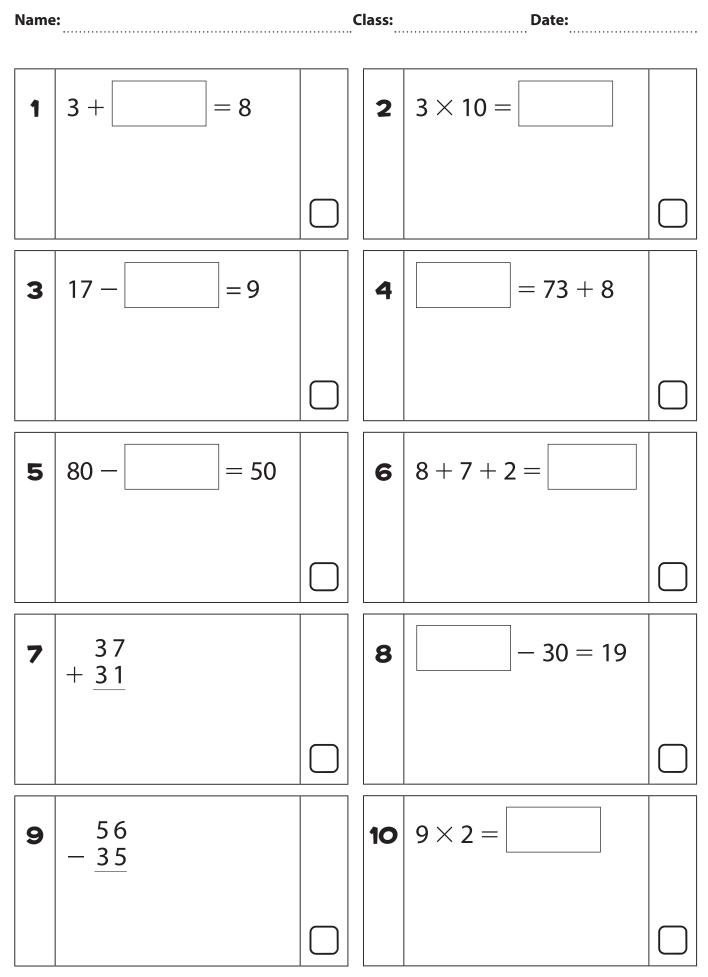
lead up to: and then:  $5 \times 4$  children = 20 children 5 pens  $\times 2 = 10$  pens 5 tens  $\times 5 = 25$  tens = 250  $3 \times 50 = 150$ 



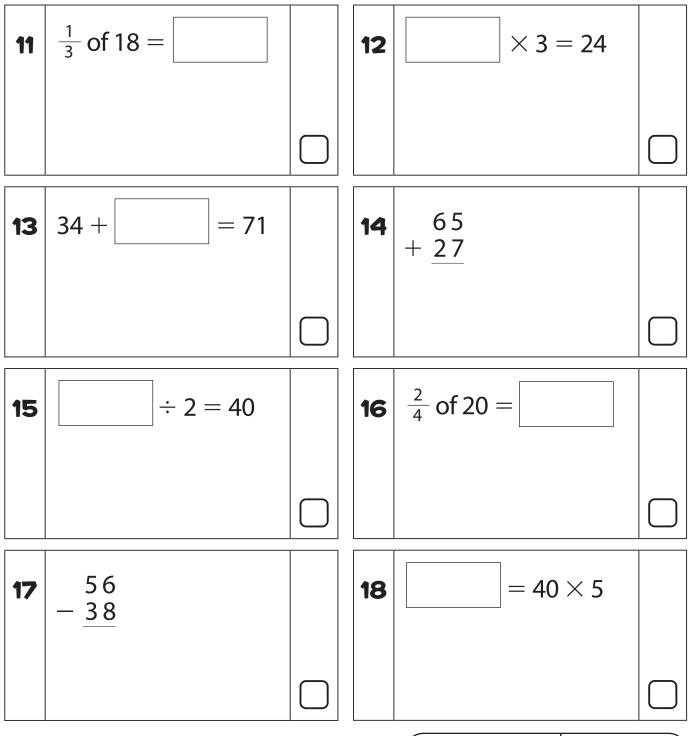
- Addition and subtraction of two two-digit numbers with and without crossing a ten
- Missing number statements with all four operations
- Multiplication and division by 10, 5, 2 and 3
- Finding a half, a third, a quarter, two quarters or three quarters of an amount

Emphasise that the children are using tables they already know to work out tables that are multiples of 10. Ask which table they would use to help with the twenty times table (i.e. the two times table). Ask which table they would use to help with the fifty times table (i.e. the five times table).

Question number	Question	Answer	Marks	Related test
1	3 + = 8	5	1	Y1 Autumn Test 5
2	3 × 10 =	30	1	Y2 Autumn Test 2
3	17 - 🗌 = 9	8	1	Y3 Autumn Test 1, Y1 Summer Test 3
4	= 73 + 8	81	1	Y2 Spring Test 3
5	80 - 🗌 = 50	30	1	Y3 Autumn Test 1, Y3 Autumn Test 3
6	8 + 7 + 2 =	17	1	Y2 Spring Test 6
7	37 + 31 =	68	1	Y3 Autumn Test 2
8	30 = 19	49	1	Y3 Autumn Test 1, Y3 Autumn Test 2
9	56 - 35 =	21	1	Y3 Autumn Test 3
10	9 × 2 = 🗌	18	1	Y2 Spring Test 1
11	$\frac{1}{3}$ of 18 =	6	1	Y3 Spring Test 1, Y2 Summer Test 5
12	$\square \times 3 = 24$	8	1	Y3 Autumn Test 5, Y3 Spring Test 1
13	34 + = 71	37	1	Y3 Autumn Test 1, Y3 Autumn Test 3
14	65 + 27 =	92	1	Y3 Autumn Test 2
15	$\Box \div 2 = 40$	80	1	Y3 Autumn Test 5, Y3 Spring Test 2
16	$\frac{2}{4}$ of 20 =	10	1	Y3 Autumn Test 4
17	56 - 38 =	18	1	Y3 Autumn Test 3
18	$\Box = 40 \times 5$	200	1	Y3 Spring Test 2, Y2 Spring Test 5
	Total	marks	18	



## Spring Test 2 (continued)



Total marks

/18

### How well did you do?

± without crossing a ten	5	7	8	9			
± crossing a ten	4	13	14	17			
2x, 5x and 10x tables	2	10	15	16	18		
3x table	2	11	12				
Tables of multiples of 10	15	18					
Fractions of an amount	11	16					
Missing number statements	1	3	5	8	12	13	15
+	4	6	7	8	14		
-	1	3	5	9	13	17	
x	2	10	12	15	16	18	
÷	11	12	16				

#### YEAR 3 ARITHMETIC PRACTICE TESTS

# **Spring Test 3**

## Teacher guidance

#### Skills and knowledge needed for this test:

- Addition of three single-digit numbers
- Addition and subtraction of multiples of 10
- Addition and subtraction of a two-digit or a three-digit number and a single-digit number with and without crossing a ten
- Addition and subtraction of a two-digit number and a multiple of 10



- Addition and subtraction of two two-digit numbers with and without crossing a ten
- Missing number statements with all four operations
- Multiplication and division by 10, 5, 2 and 3
- Derivatives of multiplication and division by 10, 5, 2 and 3
- Finding a half, a third, a quarter, two quarters or three quarters of an amount

### New: Addition and subtraction of a three-digit number and a multiple of 100

#### A teaching suggestion



Ask the children lots of questions about the value of each digit in different three-digit numbers.



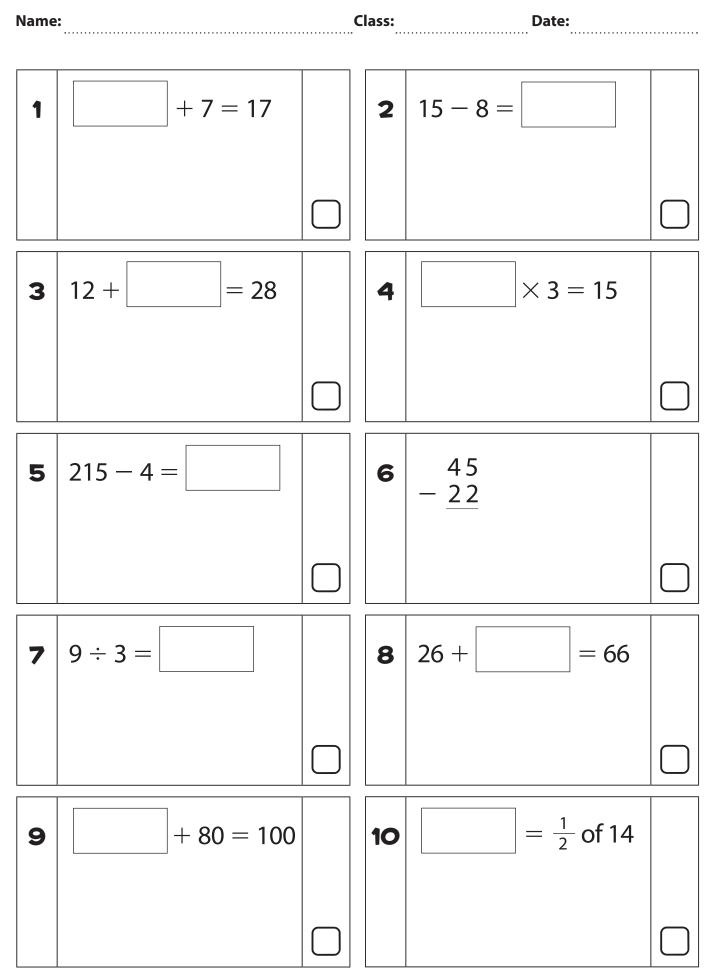
Focus on the hundreds digit and ask what the numbers would be if you had one more or one less hundred. Discuss which digit in the number changes and why. Give the children lots of practice!



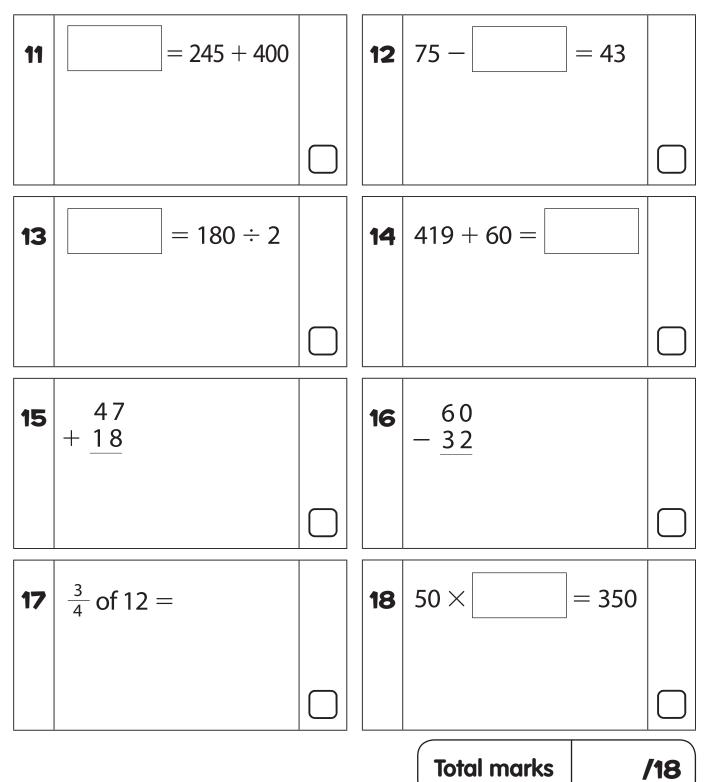
Show the written calculations vertically, emphasising the importance of lining up the columns correctly, as shown below. More able children could try this independently.



childre	en lots of practice!			
Question number	Question	Answer	Marks	Related test
1	+ 7 = 17	10	1	Y3 Autumn Test 1, Y1 Summer Test 3
2	15 - 8 =	7	1	Y1 Summer Test 1
3	12 + _ = 28	16	1	Y3 Autumn Test 1, Y3 Autumn Test 3
4	$\square \times 3 = 15$	5	1	Y3 Autumn Test 5, Y3 Spring Test 1
5	215 - 4 =	211	1	Y3 Autumn Test 6
6	45 - 22 =	23	1	Y3 Autumn Test 3
7	9 ÷ 3 =	3	1	Y3 Spring Test 1
8	26 + = 66	40	1	Y3 Autumn Test 1, Y3 Autumn Test 3
9	+ 80 = 100	20	1	Y3 Autumn Test 1, Y3 Autumn Test 3
10	$\Box = \frac{1}{2} \text{ of } 14$	7	1	Y2 Spring Test 2
11	$\Box = 245 + 400$	645	1	Y3 Spring Test 3
12	75 - 🗌 = 43	32	1	Y3 Autumn Test 1, Y3 Autumn Test 3
13	□ = 180 ÷ 2	90	1	Y3 Spring Test 2, Y2 Spring Test 1
14	419 + 60 =	479	1	Y3 Autumn Test 6
15	47 + 18 =	65	1	Y3 Autumn Test 2
16	60 - 32 =	28	1	Y3 Autumn Test 3
17	$\frac{3}{4}$ of 12 =	9	1	Y3 Autumn Test 4
18	50 × 🗌 = 350	7	1	Y3 Autumn Test 5, Y3 Spring Test 2
	Total	marks	18	
				7



## Spring Test 3 (continued)



### How well did you do?

± without crossing a ten or a hundred	1	3	5	6	8	11	12	14	
± crossing a ten or a hundred	9	15	16						
2x, 5x and 10x tables	4	10	13	18					
3x table	4	7	17						
Tables of multiples of 10	13	18							
Fractions of an amount	10	17							
Missing number statements	1	3	4	8	9	12	18		
+	11	14	15						
-	1	2	3	5	6	8	9	12	16
x	17								
÷	4	7	10	13	17	18			

### Teacher guidance

#### Skills and knowledge needed for this test:

- Addition of three single-digit numbers
- Addition and subtraction of multiples of 10
- Addition and subtraction of a two-digit or a three-digit number and a single-digit number with and without crossing a ten
- Addition and subtraction of a two-digit or a three-digit number and a multiple of 10 or 100

## New: The four times table

#### A teaching suggestion



Count in fours, forwards and backwards, using a number line and circling the numbers.



Repeat the exercise, circling the numbers on a number square. Challenge the children to spot patterns in the position of the circled numbers.

- Addition and subtraction of two two-digit numbers with and without crossing a ten
- Missing number statements with all four operations
- Multiplication and division by 10, 5, 2 and 3
- Derivatives of multiplication and division by 10, 5, 2 and 3
- Finding a half, a third, a quarter, two quarters or three quarters of an amount

Compare the four times and the two times tables, emphasising the doubling.



Sing or rap the four times table.



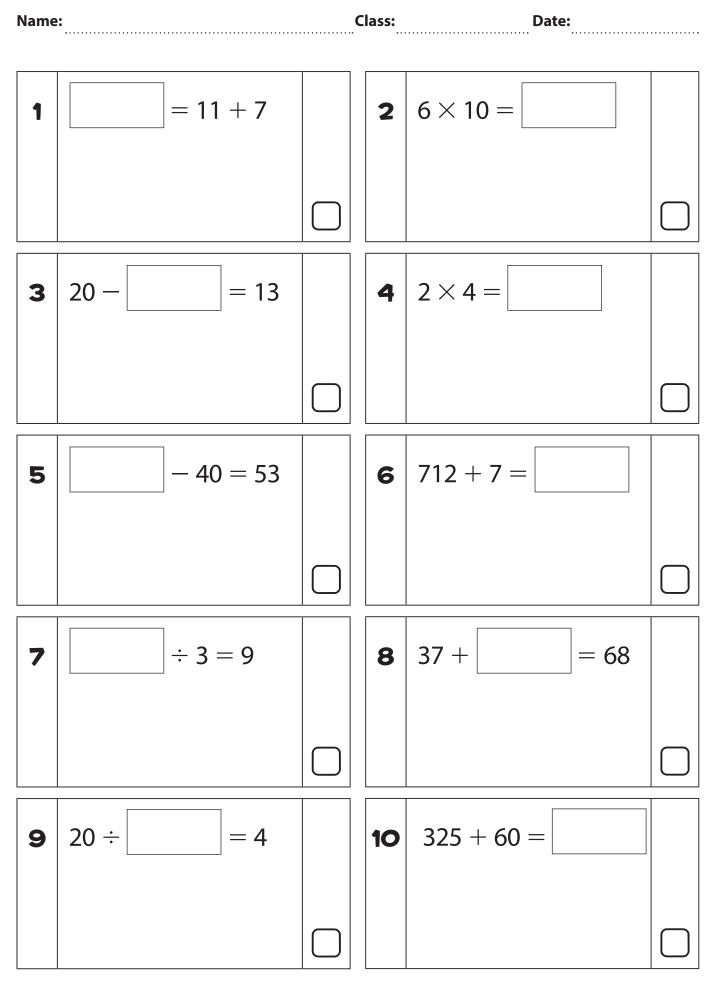
When the children are competent, mix up questions about different tables.



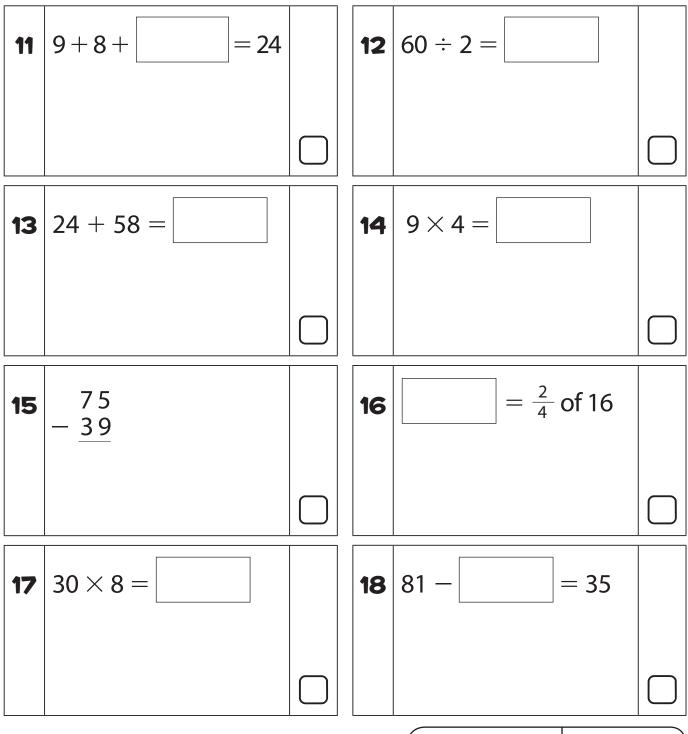
Extend work on the four times table to the forty times table, looking for similarities.

Question number	Question	Answer	Marks	Related test
1	= 11 + 7	18	1	Y1 Summer Test 4
2	6 × 10 =	60	1	Y2 Autumn Test 2
3	20 - 🗌 = 13	7	1	Y3 Autumn Test 1, Y2 Autumn Test 5
4	2 × 4 =	8	1	Y3 Spring Test 4, Y2 Spring Test 1
5	-40 = 53	93	1	Y3 Autumn Test 1, Y3 Autumn Test 2
6	712 + 7 =	719	1	Y3 Autumn Test 6
7	$\Box$ ÷ 3 = 9	27	1	Y3 Autumn Test 5, Y3 Spring Test 1
8	37 + 🗌 = 68	31	1	Y3 Autumn Test 1, Y3 Autumn Test 3
9	20 ÷ 🗌 = 4	5	1	Y3 Autumn Test 5, Y3 Spring Test 4
10	325 + 60 =	385	1	Y3 Autumn Test 6
11	9 + 8 + 🗌 = 24	7	1	Y3 Autumn Test 1, Y2 Spring Test 6
12	60 ÷ 2 =	30	1	Y3 Spring Test 2, Y2 Spring Test 1
13	24 + 58 =	82	1	Y3 Autumn Test 2
14	9 × 4 =	36	1	Y3 Spring Test 4
15	75 - 39 =	36	1	Y3 Autumn Test 2
16	$\Box = \frac{2}{4}$ of 16	8	1	Y3 Autumn Test 4
17	30 × 8 =	240	1	Y3 Spring Test 2
18	81 - 🗌 = 35	46	1	Y3 Autumn Test 1, Y3 Autumn Test 3
	Total	marks	18	





## Spring Test 4 (continued)



Total marks

/18

### How well did you do?

± without crossing a ten or a hundred	1	5	6	8	10		
± crossing a ten or a hundred	13	15	18				
2x, 5x and 10x tables	2	4	12	16			
3x table	7	17					
4x table	4	9	14	16			
Tables of multiples of 10	12	17					
Fractions of an amount	16						
Missing number statements	3	5	7	8	9	11	18
+	1	5	6	10	11	13	
-	3	8	11	15	18		
x	2	4	7	14	16	17	
÷	9	12	16				

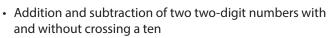
#### YEAR 3 ARITHMETIC PRACTICE TESTS

# Spring Test 5

## Teacher guidance

#### Skills and knowledge needed for this test:

- Addition of three single-digit numbers
- Addition and subtraction of multiples of 10
- Addition and subtraction of a two-digit or a three-digit number and a single-digit number with and without crossing a ten
- Addition and subtraction of a two-digit or a three-digit number and a multiple of 10 or 100



- Missing number statements with all four operations
- Multiplication and division by 10, 5, 2, 3 and 4
- Derivatives of multiplication and division by 10, 5, 2, 3 and 4
- Finding a half, a third, a quarter, two quarters or three quarters of an amount

## New: Formal written method for short multiplication

#### A teaching suggestion



Display 24  $\times$  3. Start by partitioning 24 into 20 and 4.



Multiply 3  $\times$  20 and 3  $\times$  4, giving 60 and 12, and then add these to give 72.

Explain that there is a quicker way to do this. Display: 24

×<u>3</u>



Emphasise that the digit 2 still represents 20, but that the 0 is hidden behind the 4.

Explain that we work with the ones column first: 3 x 4 is 12, so we write the 12 putting the 1 in the tens column and the 2 in the ones column (so it still reads as 12).

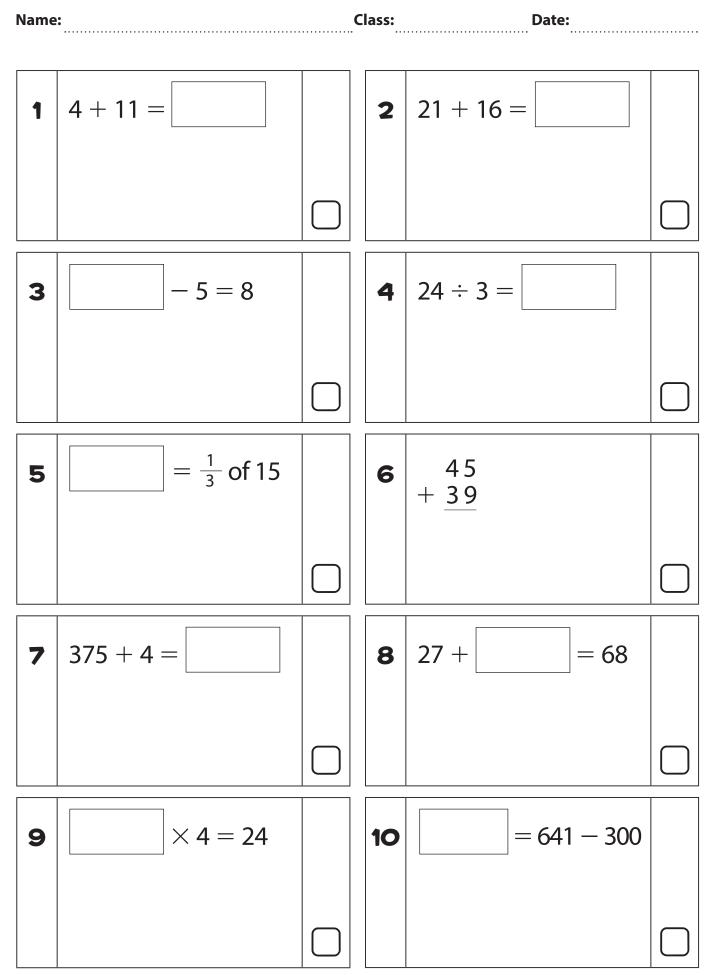
$$\times \frac{24}{\frac{2}{1}}$$

Next multiply the tens by 3 (2  $\times$  3), giving 6 tens. Then add the extra one, giving 7 tens. Write the answer 72.

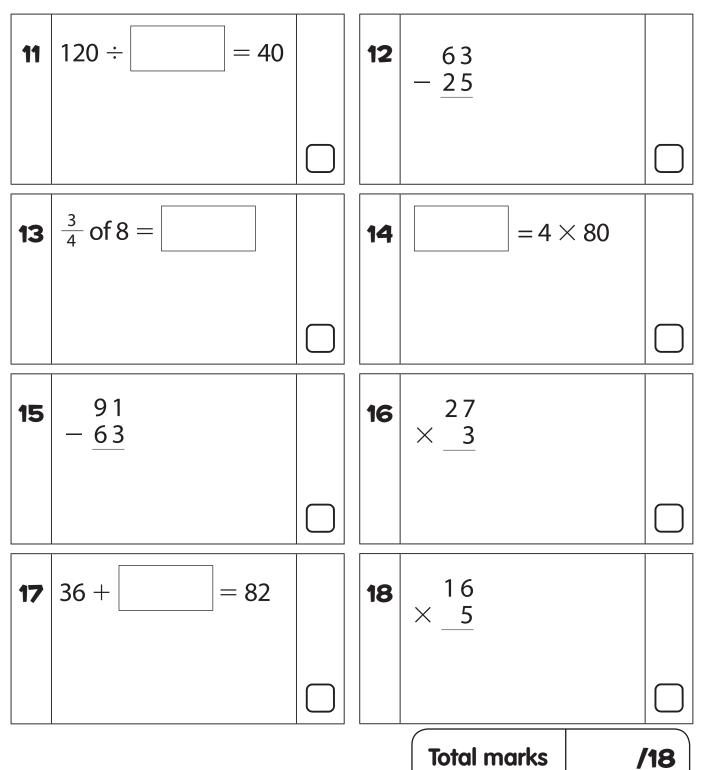


Do lots of examples with the children, let them work in pairs and, when they are confident, independently.

Question number	Question	Answer	Marks	Related test
1	4 + 11 =	15	1	Y1 Summer Test 1
2	21 + 16 =	37	1	Y3 Autumn Test 2
3	-5 = 8	13	1	Y3 Autumn Test 1, Y1 Summer Test 1
4	24 ÷ 3 =	8	1	Y3 Spring Test 1
5	$\Box = \frac{1}{3}$ of 15	5	1	Y2 Summer Test 5
6	45 + 39 =	84	1	Y3 Autumn Test 2
7	375 + 4 =	379	1	Y3 Autumn Test 6
8	27 + 🗌 = 68	41	1	Y3 Autumn Test 1, Y3 Autumn Test 3
9	$\Box \times 4 = 24$	6	1	Y3 Autumn Test 5, Y3 Spring Test 4
10	= 641 - 300	341	1	Y3 Spring Test 3
11	120 ÷ 🗌 = 40	3	1	Y3 Autumn Test 5, Y3 Spring Test 2
12	63 - 25 =	38	1	Y3 Autumn Test 3
13	$\frac{3}{4}$ of 8 =	6	1	Y3 Autumn Test 4
14	$\Box = 4 \times 80$	320	1	Y3 Spring Test 2, Y3 Spring Test 4
15	91 - 63 =	28	1	Y3 Autumn Test 3
16	27 × 3 =	81	1	Y3 Spring Test 1, Y3 Spring Test 5
17	36 + = 82	46	1	Y3 Autumn Test 1, Y3 Autumn Test 3
18	16 × 5 =	80	1	Y3 Spring Test 5, Y2 Spring Test 5
	Tot	al marks	18	



## Spring Test 5 (continued)



### How well did you do?

± without crossing a ten or a hundred	2	7	8	10	
± crossing a ten or a hundred	6	12	15	17	
2x, 5x and 10x tables	5	18			
3x table	4	5	11	13	16
4x table	9	11	13	14	
Tables of multiples of 10	11	14			
Short written x	16	18			
Fractions of an amount	5	13			
Missing number statements	3	8	9	11	17
+	1	2	3	6	7
-	8	10	12	15	17
x	13	14	16	18	
÷	4	5	9	11	13

### Teacher guidance

#### Skills and knowledge needed for this test:

- Addition of three single-digit numbers
- Addition and subtraction of multiples of 10
- Addition and subtraction of a two-digit or a three-digit number and a single-digit number with and without crossing a ten
- Addition and subtraction of a two-digit or a three-digit number and a multiple of 10 or 100
- Addition and subtraction of two two-digit numbers with and without crossing a ten
- Missing number statements with all four operations
- Multiplication and division by 10, 5, 2, 3 and 4
- Derivatives of multiplication and division by 10, 5, 2, 3 and 4
- Formal written method for short multiplication
- Finding a half, a third, a quarter, two quarters or three quarters of an amount

### New: Addition and subtraction of fractions with the same denominator, within 1

#### A teaching suggestion

Emphasise that the objects are the same before and after the operation, and that they are going to do addition and subtraction where fractions are the 'objects'.



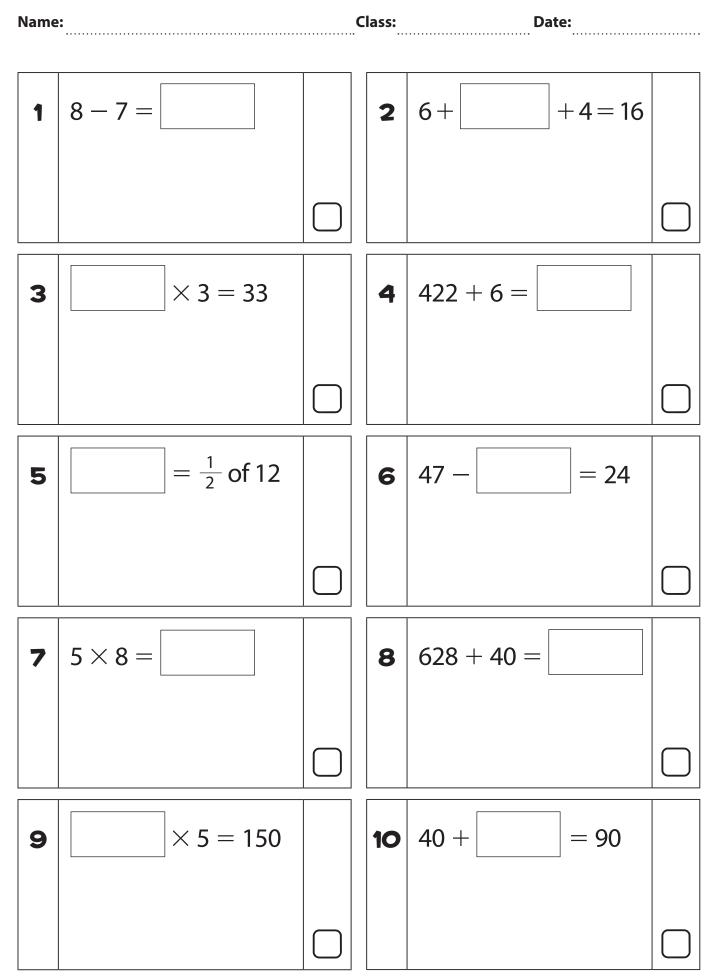
Cut a large card circle into fifths and count the fifths. Hold one fifth in one hand and two fifths in the other hand and ask the children what you are holding in each hand and then what you are holding altogether. Agree that you are always holding fifths. Show the children how to write this as  $\frac{1}{5} + \frac{2}{5} = \frac{3}{5}$ 



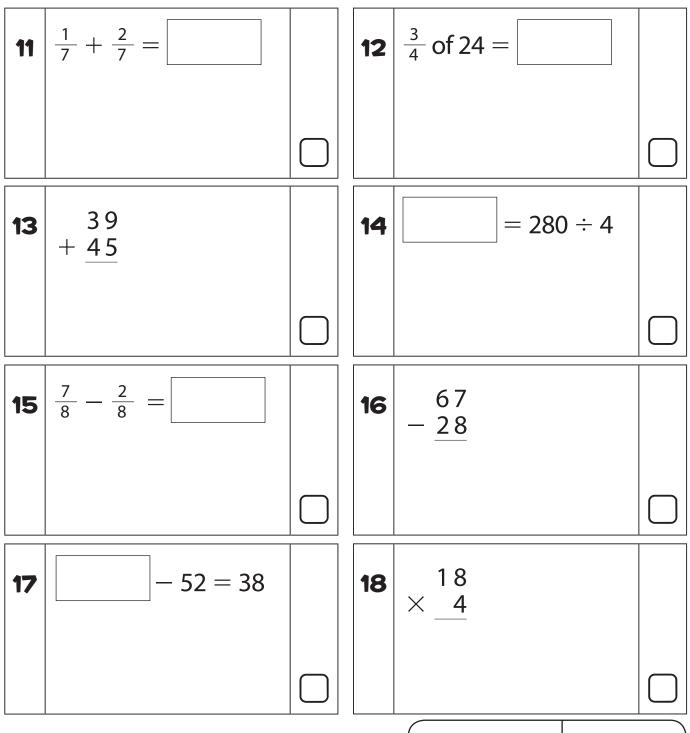
Repeat lots of examples together, then with a partner and then working alone.

Question number	Question	Answer	Marks	Related test
1	8 - 7 =	1	1	Y1 Autumn Test 5
2	6 + 🗌 + 4 = 16	6	1	Y3 Autumn Test 1, Y2 Spring Test 6
3	$\square \times 3 = 33$	11	1	Y3 Autumn Test 5, Y3 Spring Test 1
4	422 + 6 =	428	1	Y3 Autumn Test 6
5	$\Box = \frac{1}{2} \text{ of } 12$	6	1	Y2 Spring Test 2
6	47 – 🗌 = 24	23	1	Y3 Autumn Test 1, Y3 Autumn Test 3
7	5 × 8 =	40	1	Y2 Spring Test 5
8	628 + 40 =	668	1	Y3 Spring Test 3
9	$\square \times 5 = 150$	30	1	Y3 Autumn Test 5, Y3 Spring Test 2, Y2 Spring Test 5
10	40 + 🗌 = 90	50	1	Y3 Autumn Test 1, Y3 Autumn Test 3
11	$\frac{1}{7} + \frac{2}{7} = \square$	$\frac{3}{7}$	1	Y3 Spring Test 6
12	$\frac{3}{4}$ of 24 =	18	1	Y3 Autumn Test 4
13	39 + 45 =	84	1	Y3 Autumn Test 2
14	$\Box = 280 \div 4$	70	1	Y3 Spring Test 2, Y3 Spring Test 4
15	$\frac{7}{8} - \frac{2}{8} = \square$	<u>5</u> 8	1	Y3 Spring Test 6
16	67 - 28 =	39	1	Y3 Autumn Test 3
17	-52 = 38	90	1	Y3 Autumn Test 1, Y3 Autumn Test 2
18	18 × 4 =	72	1	Y3 Spring Test 4
	T	otal marks	18	

Use sets of two identical objects for addition and subtraction (e.g. 5 hands + 2hands = 7 hands).



## Spring Test 6 (continued)



Total marks

/18

## How well did you do? Colour the numbers of the questions

you got correct.

± without crossing a ten or a hundred		6	8	10		
± crossing a ten or a hundred		16	17			
2x, 5x and 10x tables		7	9			
3x and 4x tables		9	12	14	18	
Tables of multiples of 10		14				
Short written x						
Fractions of an amount		12				
± fractions		15				
Missing number statements		3	6	9	10	17
+	2	4	8	11	13	17
-	1	2	6	10	15	16
х	7	12	18			
÷.	3	5	9	12	14	

#### YEAR 3 ARITHMETIC PRACTICE TESTS

# Summer Test 1

## Teacher guidance

#### Skills and knowledge needed for this test:

- Addition of three single-digit numbers
- Addition and subtraction of multiples of 10
- Addition and subtraction of a two-digit or a three-digit number and a single-digit number with and without crossing a ten
- Addition and subtraction of a two-digit or a three-digit number and a multiple of 10 or 100
- Addition and subtraction of two two-digit numbers with and without crossing a ten
- Addition and subtraction of fractions with the same denominator, within 1
- Missing number statements with all four operations
- Multiplication and division by 10, 5, 2, 3 and 4
- Derivatives of multiplication and division by 10, 5, 2, 3 and 4
- Formal written method for short multiplication
- Finding a half, a third, a quarter, two quarters or three quarters of an amount

### New: Addition and subtraction of two three-digit numbers

#### A teaching suggestion for addition



Show the children the calculation 564 + 287 = and explain how to partition the numbers into hundreds, tens and ones:



Adding these columns gives 700 + 140 + 11

Regrouping the ones gives 700 + 150 + 1and regrouping the tens gives 800 + 50 + 1, which gives the final answer 851.



Do lots of similar examples. When the children are ready, move to standard addition, where the regrouping takes place in the calculation:

	3	7	8
+	2	4	8
	6	2	6
	1	1	

#### A teaching suggestion for subtraction



Show the children the calculation 613 - 235 = and partition the numbers into hundreds, tens and ones:

	600	10	3
_	200	30	5



Show the children how to regroup the top number to make the subtraction possible:

600 0	13	1.1	500	100	13
- 200 30	5	and then	- 200	30	5



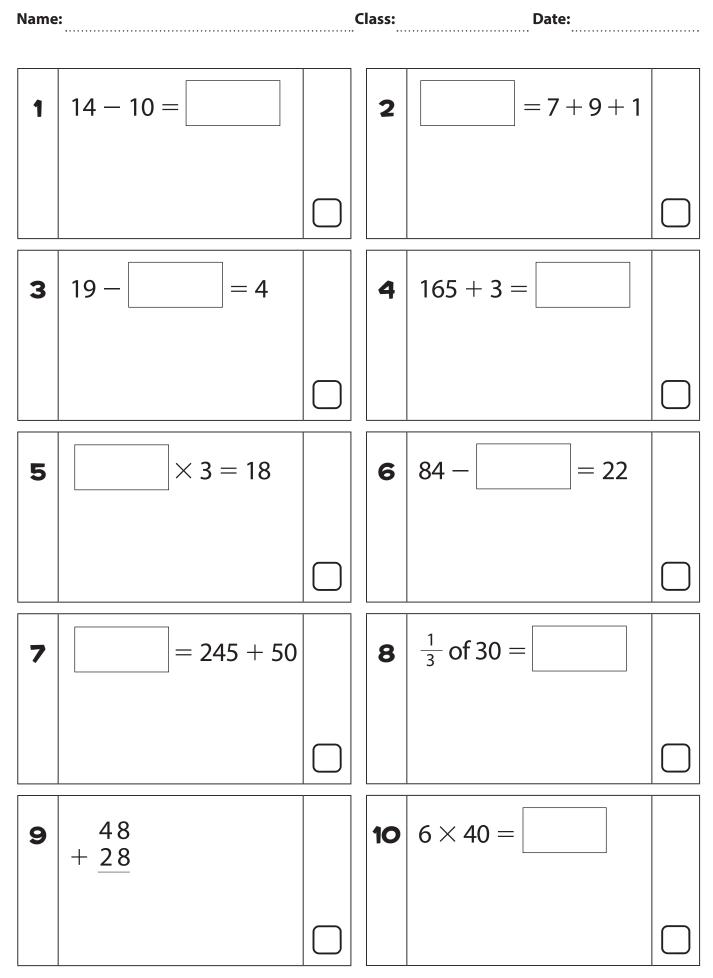
Subtracting gives 300, 70 and 8, which gives the answer 378.



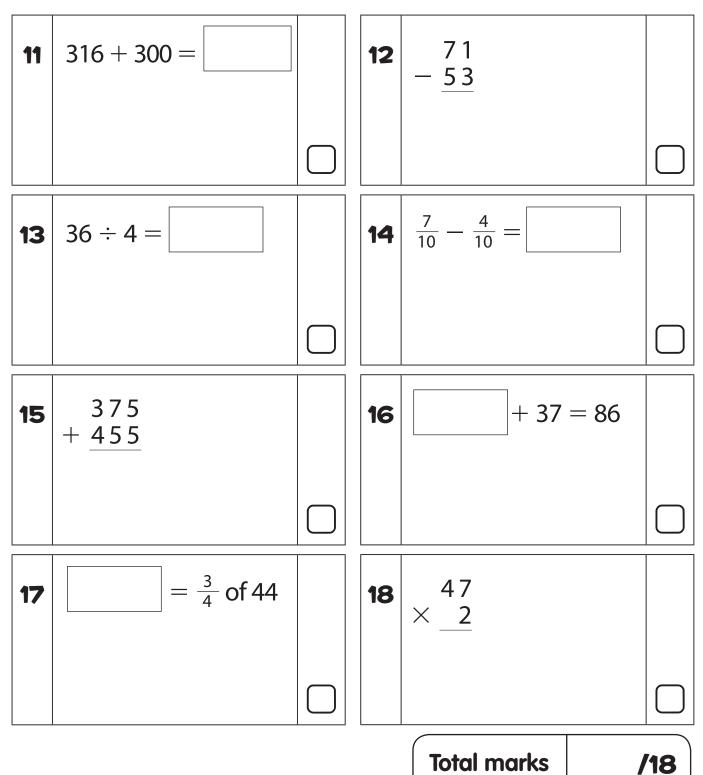
Do lots of similar examples. When the children are ready, move to standard subtraction, where the regrouping takes place in the calculation



Question number	Question	Answer	Marks	Related test
1	14 - 10 =	4	1	Y1 Summer Test 1
2	= 7 + 9 + 1	17	1	Y2 Spring Test 6
3	19 - 🗌 = 4	15	1	Y3 Autumn Test 1, Y2 Autumn Test 5
4	165 + 3 =	168	1	Y3 Autumn Test 6
5	□×3 = 18	6	1	Y3 Autumn Test 5, Y3 Spring Test 1
6	84 - 🗌 = 22	62	1	Y3 Autumn Test 1, Y3 Autumn Test 3
7	= 245 + 50	295	1	Y3 Autumn Test 6
8	$\frac{1}{3}$ of 30 =	10	1	Y2 Summer Test 5
9	48 + 28 =	76	1	Y3 Autumn Test 2
10	6 × 40 =	240	1	Y3 Spring Test 4
11	316 + 300 =	616	1	Y3 Summer Test 1
12	71 - 53 =	18	1	Y3 Autumn Test 3
13	36 ÷ 4 =	9	1	Y3 Spring Test 4
14	$\frac{7}{10} - \frac{4}{10} = \square$	<u>3</u> 10	1	Y3 Spring Test 6
15	375 + 455 =	830	1	Y3 Summer Test 1
16	+ 37 = 86	49	1	Y3 Autumn Test 1, Y3 Autumn Test 3
17	$ = \frac{3}{4} \text{ of } 44 $	33	1	Y3 Autumn Test 4
18	47 × 2 =	94	1	Y3 Spring Test 5, Y2 Spring Test 1
	Tota	l marks	18	



## Summer Test 1 (continued)



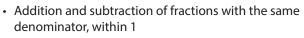
### How well did you do?

± without crossing a ten or a hundred	4	6	7	11		
± crossing a ten or a hundred	9	12	15	16		
2x, 5x and 10x tables	18					
3x and 4x tables	5	8	10	13	17	
Tables of multiples of 10	10	15				
Short written x	18					
Fractions of an amount	8	17				
± fractions	14					
Missing number statements	3	5	6	16		
+	2	4	7	9	11	15
-	1	3	6	12	14	16
X	5	10	17	18		
÷	8	13	17			

### Teacher guidance

#### Skills and knowledge needed for this test:

- Addition of three single-digit numbers
- Addition and subtraction of multiples of 10
- Addition and subtraction of a two-digit or a three-digit number and a single-digit number with and without crossing a ten
- Addition and subtraction of a two-digit or a three-digit number and a multiple of 10 or 100
- Addition and subtraction of two two-digit numbers with and without crossing a ten



- Missing number statements with all four operations
- Multiplication and division by 10, 5, 2, 3 and 4, including derivatives
- Formal written method for short multiplication
- Finding a half, a third, a quarter, two quarters or three quarters of an amount

### New: Addition of two two-digit numbers where the answer is greater than 100

#### A teaching suggestion



Review the addition of two two-digit numbers (e.g. 35 + 46 = 81) where the answer is less than 100, using columns. Then display the calculation:

47 + <u>85</u>

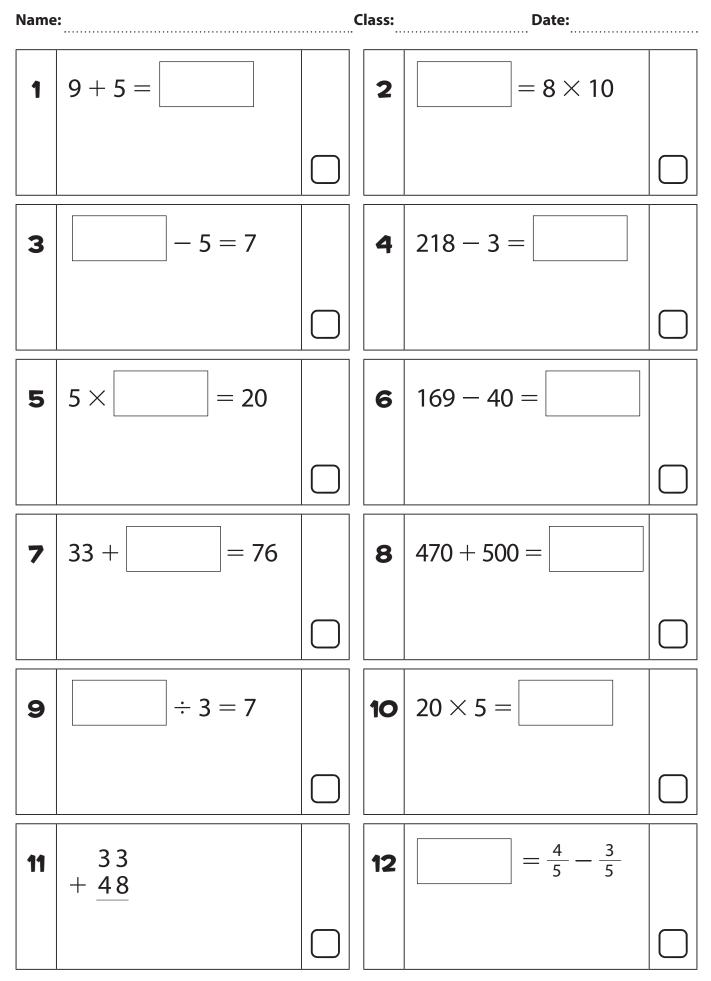


Agree that the 3 is written in the tens column and 10 tens are put in the next column. The children should know that this is the hundreds column and that 10 tens are the same as 1 hundred. There is nothing else to add, so write 1 hundred in the answer box.

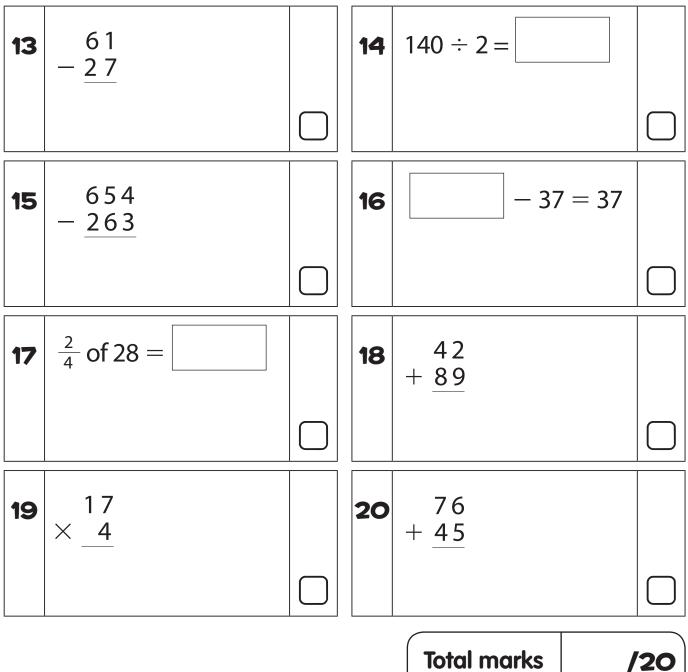
47 85 132

Work through the calculation until you have the answer for the tens column, which is 13 tens. Discuss how to write this.

Question number	Question	Answer	Marks	Related test
1	9 + 5 =	14	1	Y1 Autumn Test 5
2	$\square = 8 \times 10$	80	1	Y2 Autumn Test 2
3	-5 = 7	12	1	Y3 Autumn Test 1, Y1 Spring Test 3
4	218 -3 =	215	1	Y3 Autumn Test 6
5	5 × 🗌 = 20	4	1	Y3 Autumn Test 5, Y3 Spring Test 4, Y2 Spring Test 5
6	169 - 40 =	129	1	Y3 Autumn Test 6
7	33 + = 76	43	1	Y3 Autumn Test 1, Y3 Autumn Test 3
8	470 + 500 =	970	1	Y3 Summer Test 1
9	$\Box \div 3 = 7$	21	1	Y3 Autumn Test 5, Y3 Spring Test 1
10	20 × 5 = 🗌	100	1	Y3 Spring Test 2, Y2 Spring Test 5
11	33 + 48 =	81	1	Y3 Autumn Test 2
12	$\Box = \frac{4}{5} - \frac{3}{5}$	$\frac{1}{5}$	1	Y3 Spring Test 6
13	61 - 27 =	34	1	Y3 Autumn Test 3
14	140 ÷ 2 =	70	1	Y3 Spring Test 2, Y2 Spring Test 1
15	654 - 263 =	391	1	Y3 Summer Test 1
16	-37 = 37	74	1	Y3 Autumn Test 1, Y3 Autumn Test 2
17	$\frac{2}{4}$ of 28 =	14	1	Y3 Autumn Test 4
18	42 + 89 =	131	1	Y3 Summer Test 2
19	17 × 4 =	68	1	Y3 Spring Test 5
20	76 + 45 =	121	1	Y3 Summer Test 2
		Total marks	20	



## Summer Test 2 (continued)



/20

How well did you do?	± without crossing a ten or a hundred	4	6	7	8			
Colour the numbers of the	± crossing a ten or a hundred	11	13	15	16	18	20	
questions you got correct.	2x, 5x and 10x tables	2	5	10	14	15	17	
	3x and 4x tables	5	9	17	19			
	Tables of multiples of 10	10	14					
	Short written x	19						
	Fractions of an amount	17						
	± fractions	12						
	Missing number statements	3	5	7	9	16		
	+	1	3	8	11	16	18	20
	-	4	6	7	12	13	15	
	х	2	9	10	17	19		
	÷	5	14	17				

### YEAR 3 ARITHMETIC PRACTICE TESTS

# Summer Test 3

## Teacher guidance

### Skills and knowledge needed for this test:

- Addition of three single-digit numbers
- Addition and subtraction of multiples of 10
- Addition and subtraction of a two-digit or a three-digit number and a single-digit number with and without crossing a ten
- Addition and subtraction of a two-digit or a three-digit number and a multiple of 10 or 100
- Addition and subtraction of two two-digit numbers with and without crossing a ten

## New: The eight times table

### A teaching suggestion



Count in eights, forwards and backwards, using a number line and circling the numbers.



Compare the eight times, four times and two times tables, emphasising doubling and repeat doubling.



Sing or rap the eight times table.



When the children are competent, mix up questions about different tables.

How many eights? Don't make me wait!'

Question number	Question	Answer	Marks	Related test
1	□ = 16 - 8	8	1	Y1 Summer Test 3
2	2 + 7 + 3 =	12	1	Y2 Spring Test 6
3	563 + 🗌 = 569	6	1	Y3 Autumn Test 1, Y3 Autumn Test 6
4	15 = 5 × 🗌	3	1	Y3 Autumn Test 5, Y3 Spring Test 1, Y2 Spring Test 5
5	7 = 11	18	1	Y3 Autumn Test 1, Y1 Summer Test 4
6	36 + 48 =	84	1	Y3 Autumn Test 2
7	421 + 70 =	491	1	Y3 Autumn Test 6
8	$\square \times 8 = 32$	4	1	Y3 Autumn Test 5, Y3 Spring Test 4, Y3 Summer Test 3
9	30 × 2 =	60	1	Y3 Spring Test 2, Y2 Spring Test 1
10	□ = 582 − 300	282	1	Y3 Summer Test 1
11	28 ÷ 4 =	7	1	Y3 Spring Test 4
12	$\frac{6}{9} - \frac{1}{9} = \square$	<u>5</u> 9	1	Y3 Spring Test 6
13	270 ÷ 🗌 = 3	90	1	Y3 Autumn Test 5, Y3 Spring Test 1, Y3 Spring Test 2
14	$\frac{3}{4}$ of 48 =	36	1	Y3 Autumn Test 4
15	63 + 79 =	142	1	Y3 Summer Test 2
16	63 - 48 =	15	1	Y3 Autumn Test 3
17	$\Box = 6 \times 8$	48	1	Y3 Summer Test 3
18	19 × 3 =	57	1	Y3 Spring Test 1, Y3 Spring Test 5
19	357 + 566 =	923	1	Y3 Summer Test 1
20	75 – 🗌 = 38	37	1	Y3 Autumn Test 1, Y3 Autumn Test 3
	T	otal marks	20	



- Addition and subtraction of fractions with the same denominator, within 1
- Missing number statements with all four operations
- Multiplication and division by 10, 5, 2, 3 and 4, including derivatives
- Formal written method for short multiplication
- Finding a half, a third, a quarter, two quarters or three quarters of an amount

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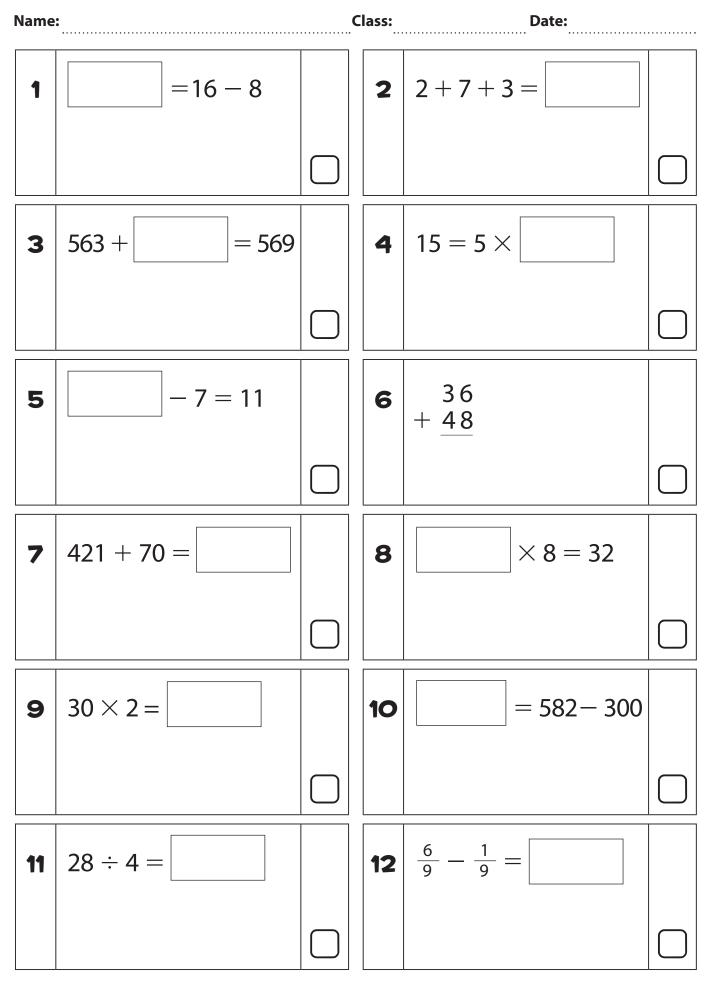
Use call and response games for multiplication fact recall, for example: ' $8 \times 7$  you know it well,  $8 \times 7$  you've got to tell.' (Children shout: 'It's 56!')

Use call and response games for division

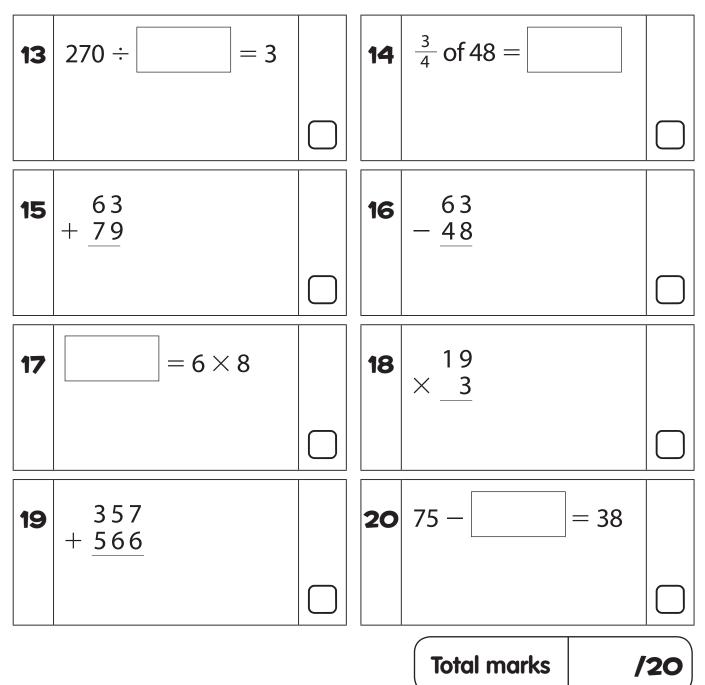
'32 can be made with eights.

(Children shout: 'lt's 4!')

fact recall, for example:



## Summer Test 3 (continued)



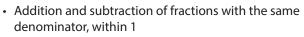
### How well did you do?

± without crossing a ten or a hundred	3	7	10				
± crossing a ten or a hundred	6	15	16	19	20		
2x, 5x and 10x tables	4	9					
3x and 4x tables	4	8	9	11	13	14	18
8x table	8	17					
Tables of multiples of 10	9	13					
Short written x	18						
Fractions of an amount	14						
± fractions	12						
Missing number statements	3	4	5	8	13	20	
+	2	5	6	7	15	19	
-	1	3	10	12	16	20	
x	9	14	17	18			
÷	4	8	11	13	14		

### Teacher guidance

#### Skills and knowledge needed for this test:

- Addition of three single-digit numbers
- Addition and subtraction of multiples of 10
- Addition and subtraction of a two-digit or a three-digit number and a single-digit number with and without crossing a ten
- Addition and subtraction of a two-digit or a three-digit number and a multiple of 10 or 100
- Addition and subtraction of two two-digit numbers with and without crossing a ten



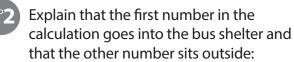
- Missing number statements with all four operations
- Multiplication and division by 10, 5, 2, 3, 4 and 8, including derivatives
- Formal written method for short multiplication
- Finding a half, a third, a quarter, two quarters or three quarters of an amount

## New: Formal written method for short division

#### A teaching suggestion



Display 75 ÷ 3. Explain that the children are going to do this calculation using 'the bus shelter' and display:



3 75

Explain that the number outside the bus shelter wants to go **in**, so first ask: 'How many groups of 3 tens are there in 7 tens?'. Agree there are two groups of 3 tens and 1 ten left over. Write the answer 2 tens in the correct place:



Agree that there is a ten and 5 ones left, and write this in:

2 3 7 <sup>1</sup>5

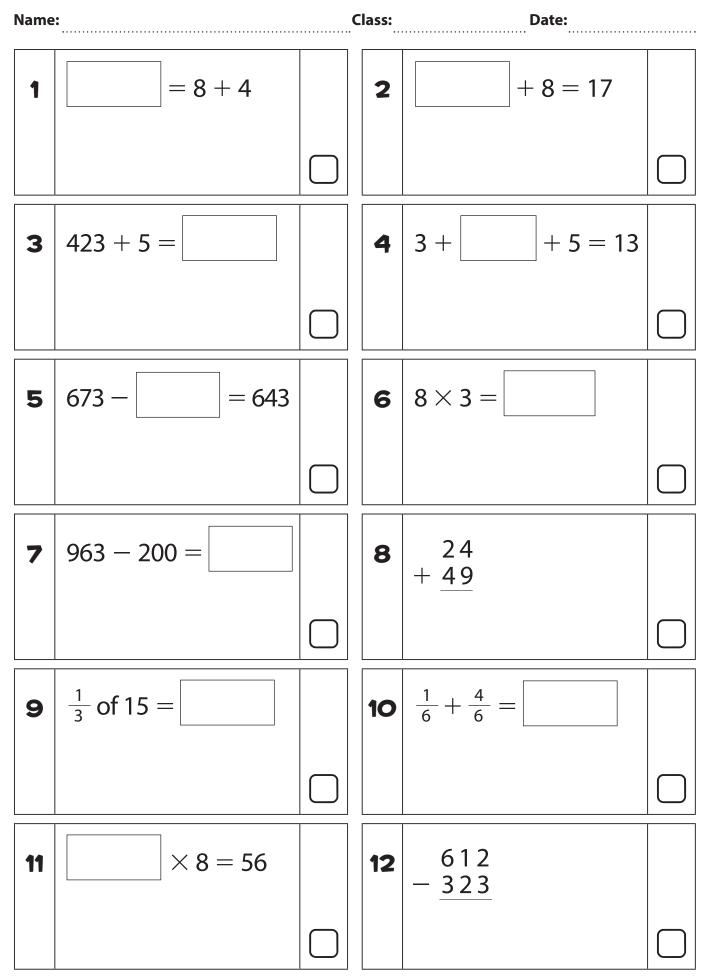
Ask, 'How many threes in 15?' and write the answer in the correct place:

25 37<sup>1</sup>5

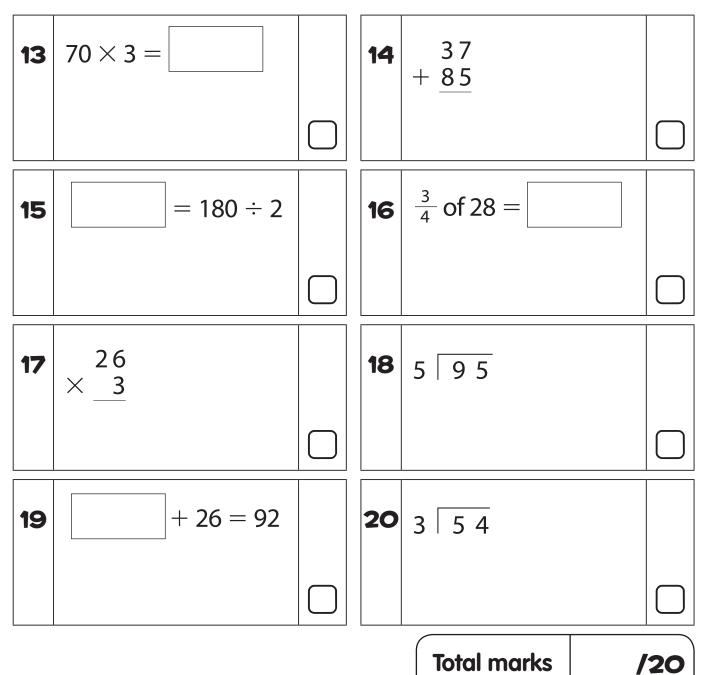


Complete lots of examples with the children. Then allow them to work with a partner to complete similar examples, before trying the work independently.

Question number	Question	Answer	Marks	Related test			
1	= 8 + 4	12	1	Y1 Spring Test 3			
2	+ 8 = 17	9	1	Y3 Autumn Test 1, Y1 Summer Test 3			
3	423 + 5 =	428	1	Y3 Autumn Test 6			
4	3++5=13	5	1	Y3 Autumn Test 1, Y2 Spring Test 6			
5	673 - 🗌 = 643	30	1	Y3 Y3 Autumn Test 1, Y3 Summer Test 1			
6	8 × 3 =	24	1	Y3 Spring Test 1, Y3 Summer Test 3			
7	963 - 200 =	763	1	Y3 Summer Test 1			
8	24 + 49 =	73	1	Y3 Autumn Test 2			
9	$\frac{1}{3}$ of 15 =	5	1	Y2 Summer Test 5			
10	$\frac{1}{6} + \frac{4}{6} = \square$	<u>5</u> 6	1	Y3 Spring Test 6			
11	□ × 8 = 56	7	1	Y3 Autumn Test 5, Y3 Summer Test 3			
12	612 - 323 =	289	1	Y3 Summer Test 1			
13	70 × 3 =	210	1	Y3 Spring Test 1, Y3 Spring Test 2			
14	37 + 85 =	122	1	Y3 Summer Test 2			
15	= 180 ÷ 2	90	1	Y3 Spring Test 2, Y2 Spring Test 1			
16	$\frac{3}{4}$ of 28 =	21	1	Y3 Autumn Test 4			
17	26 × 3 =	78	1	Y3 Spring Test 1, Y3 Spring Test 5			
18	95 ÷ 5 =	19	1	Y3 Summer Test 4, Y2 Spring Test 5			
19	+ 26 = 92	66	1	Y3 Autumn Test 1, Y3 Autumn Test 3			
20	54 ÷ 3 =	18	1	Y3 Spring Test 1, Y3 Summer Test 4			
	Total ma	arks	20				



## Summer Test 4 (continued)



### How well did you do?

± without crossing a ten or a hundred	3	5	7			
± crossing a ten or a hundred	8	12	14	19		
2x, 5x and 10x tables	9	15	16	18		
3x and 4x tables	6	9	13	16	17	20
8x table	6	11				
Tables of multiples of 10	13	15				
Short written x	17					
Short written ÷	18	20				
Fractions of an amount	9	16				
± fractions	10					
Missing number statements	2	4	5	11	19	
+	1	3	4	8	10	14
-	2	4	5	7	12	19
x	6	13	16	17		
÷	9	11	15	16	18	20

#### YEAR 3 ARITHMETIC PRACTICE TESTS

# Summer Test 5

## **Teacher guidance**

#### Skills and knowledge needed for this test:

- · Addition of three single-digit numbers
- Addition and subtraction of multiples of 10
- Addition and subtraction of a two-digit or a three-digit number and a single-digit number with and without crossing a ten
- Addition and subtraction of a two-digit or a three-digit number and a multiple of 10 or 100
- Addition and subtraction of two two-digit numbers with and without crossing a ten
- Addition and subtraction of fractions with the same denominator, within 1
- · Missing number statements with all four operations
- Multiplication and division by 10, 5, 2, 3, 4 and 8, including derivatives
- Formal written method for short multiplication and short division
- Finding a half, a third, a quarter, two quarters or three quarters of an amount

## New: Multiplication of three single-digit numbers

#### A teaching suggestion



Display  $4 \times 9 \times 5$ .

- Work through the calculation in order so  $4 \times 9 \times 5 = 36 \times 5$  (and now write this as a short multiplication in columns) = 180.
- Now rearrange the numbers, so  $4 \times 9 \times 5$  $= 4 \times 5 \times 9$ . Explain that you have done this because  $4 \times 5$  is a simpler calculation.

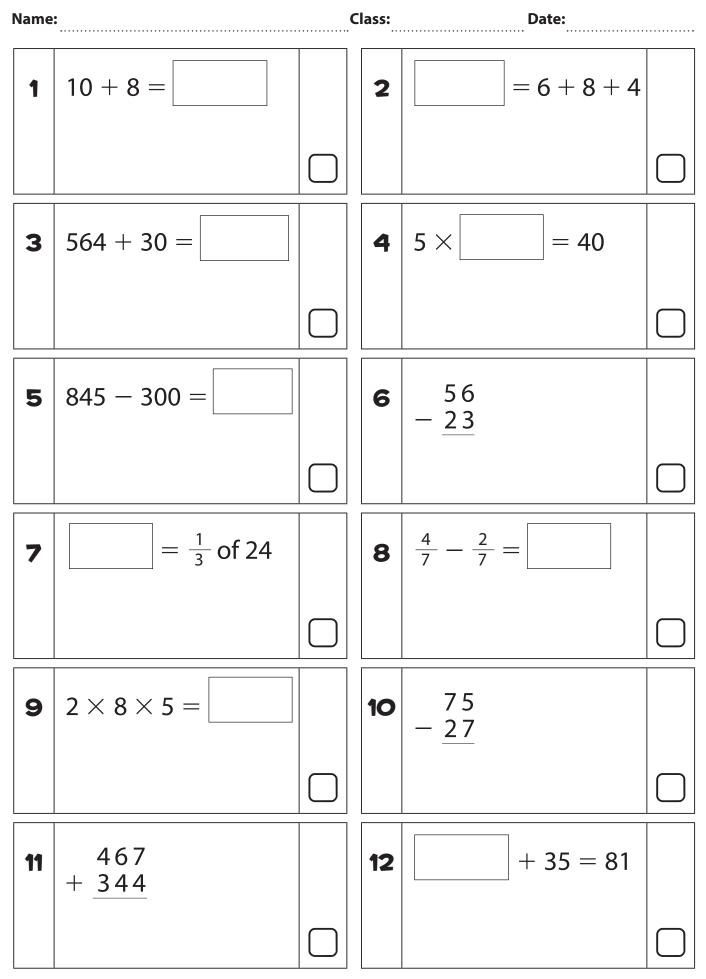


Now  $4 \times 5 \times 9 = 20 \times 9$  (and emphasise that this is now far simpler) = 180.

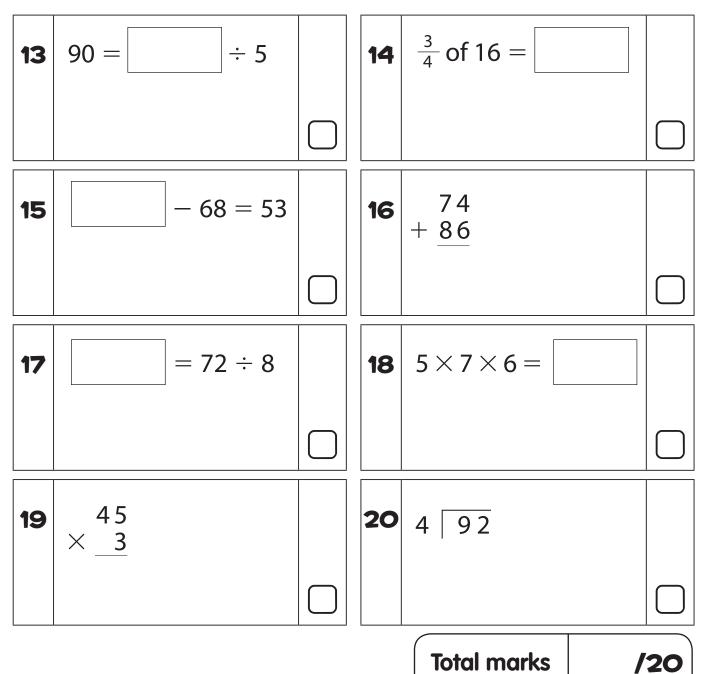
Complete similar examples, asking the

children to identify which pair of numbers it would be best to multiply first. Ensure that they understand that multiplication can be done in any order (the 'associative law of multiplication').

Question number	Question	Answer	Marks	Related test
1	10 + 8 =	18	1	Y1 Summer Test 4
2	$\Box = 6 + 8 + 4$	18	1	Y2 Spring Test 6
3	564 + 30 =	594	1	Y3 Spring Test 2
4	5 × 🗌 = 40	8	1	Y3 Autumn Test 5, Y2 Spring Test 5
5	845 - 300 =	545	1	Y3 Spring Test 3
6	56 - 23 =	33	1	Y3 Autumn Test 3
7	$=\frac{1}{3}$ of 24	8	1	Y2 Summer Test 5
8	$\frac{4}{7} - \frac{2}{7} = \square$	$\frac{2}{7}$	1	Y3 Spring Test 6
9	$2 \times 8 \times 5 = \Box$	80	1	Y3 Summer Test 5
10	75 - 27 =	48	1	Y3 Autumn Test 3
11	467 + 344 =	811	1	Y3 Summer Test 1
12	+ 35 = 81	46	1	Y3 Autumn Test 1, Y3 Autumn Test 3
13	90 = 🗌 ÷ 5	450	1	Y3 Autumn Test 5, Y3 Spring Test 2, Y2 Spring Test 5
14	$\frac{3}{4}$ of 16 =	12	1	Y3 Autumn Test 4
15	68 = 53	121	1	Y3 Autumn Test 1, Y3 Summer Test 2
16	74 + 86 =	160	1	Y3 Summer Test 2
17	$\Box = 72 \div 8$	9	1	Y3 Summer Test 3
18	$5 \times 7 \times 6 = \square$	210	1	Y3 Summer Test 5
19	45 × 3 =	135	1	Y3 Spring Test 1, Y3 Spring Test 5
20	92 ÷ 4 =	23	1	Y3 Spring Test 4, Y3 Summer Test 4
	Т	otal marks	20	



## Summer Test 5 (continued)



### How well did you do?

± without crossing a ten or a hundred		3	5	6			
± crossing a ten or a hundred	1	10	11	12	15	16	
2x, 5x and 10x tables		4	9	13	18		
3x and 4x tables		7	11	14	19	20	
8x table		4	9	17			
Tables of multiples of 10	-	13					
Short written x	-	19					
Short written ÷	2	20					
Multiply three numbers		9	18				
Fractions of an amount		7	14				
± fractions		8					
Missing number statements		4	12	13	15		
+		1	2	3	11	15	16
-		5	6	8	10	12	
x		9	14	18	19		
÷		4	7	13	14	17	20



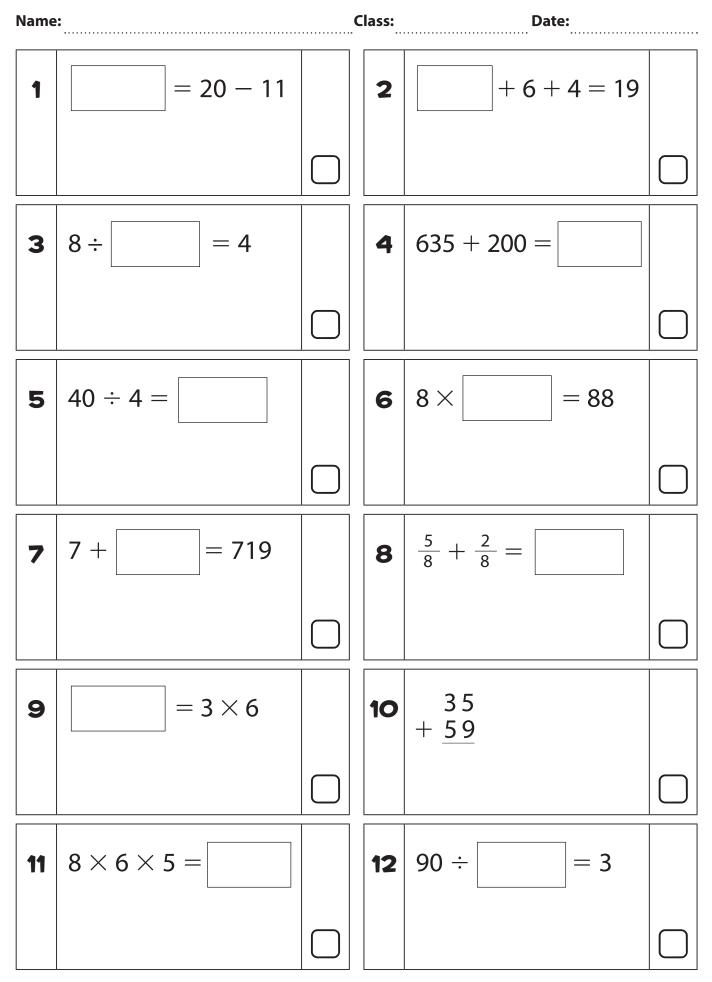
#### Skills and knowledge needed for this test:

- Addition of three single-digit numbers
- Addition and subtraction of multiples of 10
- Addition and subtraction of a two-digit or a three-digit number and a single-digit number with and without crossing a ten
- Addition and subtraction of a two-digit or a three-digit number and a multiple of 10 or 100
- Addition and subtraction of two two-digit numbers with and without crossing a ten
- Addition and subtraction of fractions with the same denominator, within 1

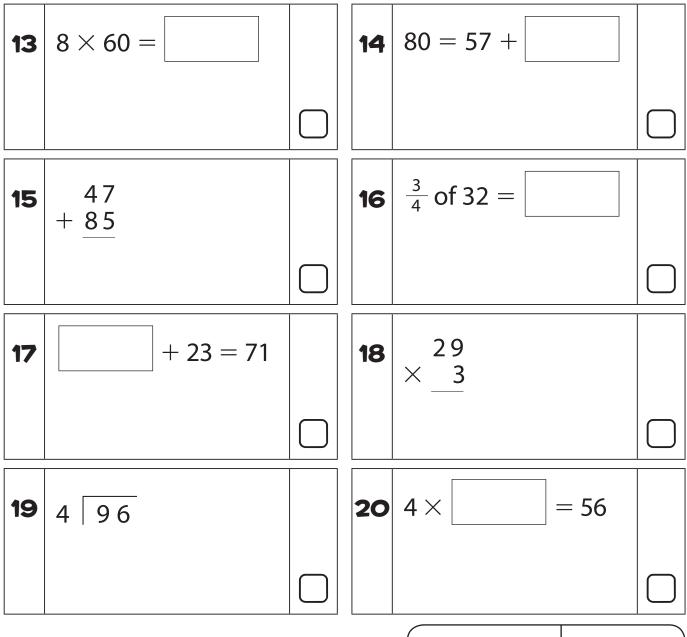
- Missing number statements with all four operations
- Multiplication and division by 10, 5, 2, 3, 4 and 8, including derivatives
- Multiplication of three numbers
- Formal written method for short multiplication and division
- Finding a half, a third, a quarter, two quarters or three quarters of an amount

### There are no new skills. This is the end of year test.

Question number	Question	Answer	Marks	Related test
1	□ = 20 − 11	9	1	Y1 Summer Test 5
2	+ 6 + 4 = 19	9	1	Y3 Autumn Test 1, Y2 Spring Test 6
3	8 ÷ 🗌 = 4	2	1	Y3 Autumn Test 5, Y3 Spring Test 4
4	635 + 200 =	835	1	Y3 Summer Test 1
5	40 ÷ 4 =	10	1	Y3 Spring Test 2, Y3 Spring Test 4
6	8 × 🗌 = 88	11	1	Y3 Autumn Test 5, Y3 Summer Test 3
7	7 + 🗌 = 719	712	1	Y3 Autumn Test 1, Y3 Autumn Test 6
8	$\frac{5}{8} + \frac{2}{8} = \square$	<u>7</u> 8	1	Y3 Spring Test 6
9	$\Box = 3 \times 6$	18	1	Y3 Spring Test 1
10	35 + 59 =	94	1	Y3 Autumn Test 2
11	8 × 6 × 5 =	240	1	Y3 Summer Test 5
12	90 ÷ 🗌 = 3	30	1	Y3 Autumn Test 5, Y3 Spring Test 1, Y3 Spring Test 2
13	8 × 60 =	480	1	Y3 Summer Test 3, Y3 Spring Test 2
14	80 = 57 +	23	1	Y3 Autumn Test 1, Y3 Autumn Test 3
15	47 + 85 =	132	1	Y3 Summer Test 2
16	$\frac{3}{4}$ of 32 =	24	1	Y3 Autumn Test 4
17	+ 23 = 71	48	1	Y3 Autumn Test 1, Y3 Autumn Test 3
18	29 × 3 =	87	1	Y3 Spring Test 1, Y3 Spring Test 5
19	96 ÷ 4 =	24	1	Y3 Spring Test 4, Y3 Summer Test 4
20	4 × 🗌 = 56	14	1	Y3 Autumn Test 5, Y3 Spring Test 4, Y3 Summer Test 4
	Т	otal marks	20	



## Summer Test 6 (continued)



Total marks

/20

### How well did you do?

± without crossing a ten or a hundred	4	7						
± crossing a ten or a hundred	10	14	15	17				
2x, 5x and 10x tables	11	19						
3x and 4x tables	3	5	9	12	16	18	20	
8x table	3	6	11	13				
Tables of multiples of 10	5	12	13					
Short written x	18							
Short written ÷	19							
Multiply three numbers	11							
Fractions of an amount	16							
± fractions	8							
Missing number statements	2	3	6	7	12	14	17	20
+	2	8	10	15				
-	1	2	4	7	14	17		
x	9	11	13	16	18			
÷	3	5	6	12	16	19	20	