

New Curriculum Arithmetic Practice Tests

To prepare for the new Mathematics National Test Paper 1 (Arithmetic)

The new Mathematics National Test Paper 1 (Arithmetic)
is 30 minutes with 30 marks, testing content from
the number domain only.

New Curriculum Arithmetic Practice Tests Sample Overview

What's included?

Year 1 Arithmetic Practice Tests

Autumn Test 5

Year 3 Arithmetic Practice Tests

Summer Test 3

Year 5 Arithmetic Practice Tests

Spring Test 1

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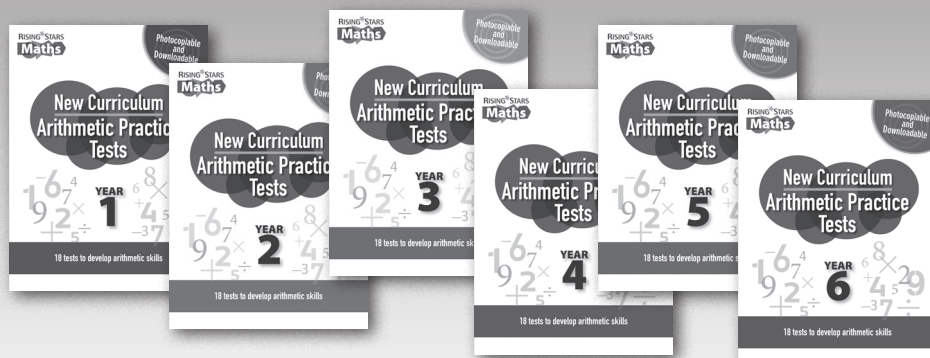
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Autumn Test 5

Teacher guidance

Skills and knowledge needed for this test:

- Number knowledge of 0 to 9
- +, - and = signs
- Addition and subtraction with number bonds to 7
- Addition and subtraction of 0



New: Number bonds for 8 and 9

A teaching suggestion

Step 1 Write out the number story of 8.

$$\begin{aligned} 0 + 8 &= 8 \\ 1 + 7 &= 8 \\ 2 + 6 &= 8 \\ 3 + 5 &= 8 \\ 4 + 4 &= 8 \\ 5 + 3 &= 8 \\ 6 + 2 &= 8 \\ 7 + 1 &= 8 \\ 8 + 0 &= 8 \end{aligned}$$

Step 2 Recite the number story, using rap style.

Step 3 Sing the number story (perhaps using the tune for 'The Grand Old Duke of York').

Step 4 Challenge the children to find how many number bonds there are in the number story of 8. (There are five different number bonds so there are only five to learn.) Use this to illustrate the commutative law (e.g. $1 + 7 = 8$ and $7 + 1 = 8$).

Step 5 Use the number story to build fact families that use addition and subtraction (e.g. $3 + 5 = 8$, $8 - 5 = 3$, $8 - 3 = 5$).

Step 6 Play 'I am thinking of the number story of 8. One of the numbers I am thinking of is 2. What is the other?'. Repeat with other numbers.

Step 7 Repeat for the number bonds for 9.

Step 8 Review all the number bonds to date by holding up a pair of numbers and asking the children to call out which number story they are in together (e.g. 3 and 2 are from the story of 5 as in $3 + 2 = 5$, or from the story of 3 as in $3 - 2 = 1$).

Question number	Question	Answer	Marks	Related test
1	$5 - 1 = \square$	4	1	Y1 Autumn Test 1, Y1 Autumn Test 2
2	$\square = 4 - 4$	0	1	Y1 Autumn Test 1, Y1 Autumn Test 2
3	$1 + 5 = \square$	6	1	Y1 Autumn Test 4
4	$5 + 0 = \square$	5	1	Y1 Autumn Test 3
5	$\square = 9 - 3$	6	1	Y1 Autumn Test 5
6	$2 + 6 = \square$	8	1	Y1 Autumn Test 5
Total marks			6	

Autumn Test 5

Name: Class: Date:

1	$5 - 1 =$ <input data-bbox="552 371 855 524" type="text"/>	<input data-bbox="1369 712 1449 792" type="checkbox"/>
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2	<input data-bbox="274 904 580 1057" type="text"/> $= 4 - 4$	<input data-bbox="1369 1240 1449 1321" type="checkbox"/>
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3	$1 + 5 =$ <input data-bbox="552 1438 855 1590" type="text"/>	<input data-bbox="1369 1778 1449 1859" type="checkbox"/>
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Autumn Test 5 (continued)

4	$5 + 0 =$ <input style="width: 150px; height: 40px;" type="text"/>	<input style="width: 40px; height: 40px;" type="checkbox"/>
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5	<input style="width: 150px; height: 40px;" type="text"/> $= 9 - 3$	<input style="width: 40px; height: 40px;" type="checkbox"/>
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6	$2 + 6 =$ <input style="width: 150px; height: 40px;" type="text"/>	<input style="width: 40px; height: 40px;" type="checkbox"/>
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Total marks	/6
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How well did you do?

Colour the numbers of the questions you got correct.

Number bonds to 7	1	2	3	4
Number bonds for 8 and 9	5	6		
± 0	4			
+	3	4	6	
-	1	2	5	

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
- 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

New: The eight times table

A teaching suggestion

Step 1 Count in eights, forwards and backwards, using a number line and circling the numbers.

Step 2 Compare the eight times, four times and two times tables, emphasising doubling and repeat doubling.

Step 3 Sing or rap the eight times table.

Step 4 Use call and response games for multiplication fact recall, for example:
' 8×7 you know it well,
 8×7 you've got to tell!
(Children shout: 'It's 56!')

Step 5 Use call and response games for division fact recall, for example:
'32 can be made with eights.
How many eights? Don't make me wait!
(Children shout: 'It's 4!')

Step 6 When the children are competent, mix up questions about different tables.

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

Summer Test 3

Name: Class: Date:

1	<input type="text"/> = 16 - 8	<input type="checkbox"/>
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2	2 + 7 + 3 = <input type="text"/>	<input type="checkbox"/>
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3	563 + <input type="text"/> = 569	<input type="checkbox"/>
----------	----------------------------------	--------------------------

4	15 = 5 × <input type="text"/>	<input type="checkbox"/>
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5	<input type="text"/> - 7 = 11	<input type="checkbox"/>
----------	-------------------------------	--------------------------

6	$\begin{array}{r} 36 \\ + 48 \\ \hline \end{array}$	<input type="checkbox"/>
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7	421 + 70 = <input type="text"/>	<input type="checkbox"/>
----------	---------------------------------	--------------------------

8	<input type="text"/> × 8 = 32	<input type="checkbox"/>
----------	-------------------------------	--------------------------

9	30 × 2 = <input type="text"/>	<input type="checkbox"/>
----------	-------------------------------	--------------------------

10	<input type="text"/> = 582 - 300	<input type="checkbox"/>
-----------	----------------------------------	--------------------------

11	28 ÷ 4 = <input type="text"/>	<input type="checkbox"/>
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12	$\frac{6}{9} - \frac{1}{9} =$ <input type="text"/>	<input type="checkbox"/>
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Summer Test 3 (continued)

13 $270 \div \square = 3$

14 $\frac{3}{4}$ of 48 = \square

15

$$\begin{array}{r} 63 \\ + 79 \\ \hline \end{array}$$

16

$$\begin{array}{r} 63 \\ - 48 \\ \hline \end{array}$$

17 $\square = 6 \times 8$

18

$$\begin{array}{r} 19 \\ \times 3 \\ \hline \end{array}$$

19

$$\begin{array}{r} 357 \\ + 566 \\ \hline \end{array}$$

20 $75 - \square = 38$

Total marks	/20
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How well did you do?

Colour the numbers of the questions you got correct.

± 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		

Spring Test 1

Teacher guidance



Skills and knowledge needed for this test:

- Addition and subtraction of two numbers up to four digits
- Addition and subtraction of fractions with the same denominator
- Multiplication and division to 12×12 including derivatives of multiples of 100
- Multiplication of three numbers
- Multiplication by 0; multiplication and division by 1; square numbers
- Formal written method for short multiplication (to HTO) and short division (to TO), including with remainders
- Multiplication and division of whole numbers by 10, 100 or 1000
- Missing number statements with all four operations

New: Cube numbers

A teaching suggestion

Step 1 Give the children cubes to use. Discuss the properties of a cube and agree that all the faces are square and that all the edges are the same length.

Step 2 Use eight single cubes to build a $2 \times 2 \times 2$ cube and count the cubes that you used. Show that it has two rows, two columns and two layers, and that $2 \times 2 \times 2 = 8$.

Step 3 Ask the children to investigate other cubes that they can build and to make a table of their results.

Rows	Columns	Layers	Number of cubes
2	2	2	8

Step 4 Collect and display the results and explain that these numbers are called 'cube numbers' because they make a cube! (Using cubes to investigate cube numbers makes the concept and mathematical vocabulary more memorable for children.)

Step 5 Introduce the notation 3^3 for 3 multiplied by itself 3 times (hence the ³) where $3^3 = 3 \times 3 \times 3 = 27$.

Question number	Question	Answer	Marks	Related test
1	$19 \times 1 = \square$	19	1	Y4 Autumn Test 6
2	$\square = 35 \div 7$	5	1	Y4 Spring Test 6
3	$473 \times 100 = \square$	47 300	1	Y5 Autumn Test 5
4	$4^2 = \square$	16	1	Y5 Autumn Test 4
5	$701 - 523 = \square$	178	1	Y5 Autumn Test 3
6	$9 \div 10 = \square$	0.9	1	Y5 Autumn Test 5
7	$2 \times 0 = \square$	0	1	Y4 Autumn Test 4
8	$\frac{17}{10} - \frac{9}{10} = \square$	$\frac{8}{10}$ (or equiv)	1	Y5 Autumn Test 2
9	$\square = 28 \div 1$	28	1	Y4 Autumn Test 6
10	$12^2 = \square$	144	1	Y5 Autumn Test 4
11	$\square \times 6 = 72$	12	1	Y4 Autumn Test 3, Y4 Spring Test 4
12	$444 = 732 - \square$	288	1	Y4 Spring Test 3, Y3 Autumn Test 1
13	$\frac{2}{4}$ of 20 = \square	10	1	Y3 Autumn Test 4
14	$6314 + 2789 = \square$	9103	1	Y4 Spring Test 1
15	$\frac{5}{6} + \frac{5}{6} = \square$	$1\frac{4}{6}$ (or equiv)	1	Y5 Autumn Test 2
16	$400 \times 8 = \square$	3200	1	Y4 Summer Test 5, Y3 Summer Test 3
17	$\square = \frac{1}{3}$ of 42	14	1	Y2 Summer Test 5
18	$146 \times 7 = \square$	1022	1	Y4 Summer Test 1
19	$6512 - 1826 = \square$	4686	1	Y4 Spring Test 3
20	$98 \div 6 = \square$	16 r2	1	Y5 Autumn Test 6
21	$5 \times 46 \times 2 = \square$	460	1	Y4 Summer Test 3
22	$48 = \square \div 8$	384	1	Y4 Autumn Test 3, Y3 Summer Test 3
23	$2^3 = \square$	8	1	Y5 Spring Test 1
24	$\square + 492 = 781$	289	1	Y4 Spring Test 3, Y3 Autumn Test 1
25	$324 \div 100 = \square$	3.24	1	Y5 Autumn Test 5
26	$896 \times 9 = \square$	8064	1	Y4 Summer Test 1
27	$8000 - 2145 = \square$	5855	1	Y5 Autumn Test 3
28	$\square = 5^3$	125	1	Y5 Spring Test 1
Total marks			28	

Spring Test 1

Name: Class: Date:

1	$19 \times 1 =$ <input type="text"/>	<input type="checkbox"/>
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2	<input type="text"/> $= 35 \div 7$	<input type="checkbox"/>
----------	------------------------------------	--------------------------

3	$473 \times 100 =$ <input type="text"/>	<input type="checkbox"/>
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4	$4^2 =$ <input type="text"/>	<input type="checkbox"/>
----------	------------------------------	--------------------------

5	$701 - 523 =$ <input type="text"/>	<input type="checkbox"/>
----------	------------------------------------	--------------------------

6	$9 \div 10 =$ <input type="text"/>	<input type="checkbox"/>
----------	------------------------------------	--------------------------

7	$2 \times 0 =$ <input type="text"/>	<input type="checkbox"/>
----------	-------------------------------------	--------------------------

8	$\frac{17}{10} - \frac{9}{10} =$ <input type="text"/>	<input type="checkbox"/>
----------	---	--------------------------

9	<input type="text"/> $= 28 \div 1$	<input type="checkbox"/>
----------	------------------------------------	--------------------------

10	$12^2 =$ <input type="text"/>	<input type="checkbox"/>
-----------	-------------------------------	--------------------------

11	<input type="text"/> $\times 6 = 72$	<input type="checkbox"/>
-----------	--------------------------------------	--------------------------

12	$444 = 732 -$ <input type="text"/>	<input type="checkbox"/>
-----------	------------------------------------	--------------------------

13	$\frac{2}{4}$ of 20 = <input type="text"/>	<input type="checkbox"/>
-----------	--	--------------------------

14	$\begin{array}{r} 6314 \\ + 2789 \\ \hline \end{array}$	<input type="checkbox"/>
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15	$\frac{5}{6} + \frac{5}{6} =$ <input type="text"/>	<input type="checkbox"/>
-----------	--	--------------------------

16	$400 \times 8 =$ <input type="text"/>	<input type="checkbox"/>
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Spring Test 1 (continued)

17	<input style="width: 100%;" type="text"/> = $\frac{1}{3}$ of 42	<input type="checkbox"/>
18	$\begin{array}{r} 146 \\ \times \quad 7 \\ \hline \end{array}$	<input type="checkbox"/>
19	6512 - 1826 = <input style="width: 100%;" type="text"/>	<input type="checkbox"/>
20	$6 \overline{)98}$	<input type="checkbox"/>
21	5 × 46 × 2 = <input style="width: 100%;" type="text"/>	<input type="checkbox"/>
22	48 = <input style="width: 100%;" type="text"/> ÷ 8	<input type="checkbox"/>
23	2 ³ = <input style="width: 100%;" type="text"/>	<input type="checkbox"/>
24	<input style="width: 100%;" type="text"/> + 492 = 781	<input type="checkbox"/>
25	324 ÷ 100 =	<input type="checkbox"/>
26	$\begin{array}{r} 896 \\ \times \quad 9 \\ \hline \end{array}$	<input type="checkbox"/>
27	$\begin{array}{r} 8000 \\ - 2145 \\ \hline \end{array}$	<input type="checkbox"/>
28	<input style="width: 100%;" type="text"/> = 5 ³	<input type="checkbox"/>

Total marks	/28
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How well did you do?

Colour the numbers of the questions you got correct.

– with zeros	5	27																	
Multiples of tables	16																		
Square and cube numbers	4	10	23	28															
÷ or x by 10, 100 or 1000	3	6	25																
Short x	18	22	26																
Short ÷, including r	17	20																	
Fractions	8	13	15	17															
Missing numbers	11	12	22	24															
+	14	15																	
–	5	8	12	19	24	27													
x	1	3	4	7	10	13	16	18	21	23	26	28							
÷	2	6	9	11	13	17	20	22	25										