Spring Test 1

Teacher guidance

28 minutes

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**	