

Spring Test 2

Teacher guidance

Skills and knowledge covered in this test:

- Calculate intervals across zero [6N5]
- Add and subtract numbers greater than 4 digits [5C2]
- Recognise and use the notation for squared and cubed [5C5d]
- Multiply multi-digit numbers up to 4 digits by up to 2-digit numbers using long or short multiplication [6C7a]
- Divide numbers up to 4 digits by a 2-digit number using long or short division, including with remainders [6C7b], [6C7c]
- Solve problems involving addition, subtraction, multiplication and division [6C8]
- Use the order of operations to carry out calculations (BIDMAS) [6C9]
- Add and subtract fractions and mixed numbers [6F4]
- Multiply proper fractions and mixed numbers by whole numbers [5F5]
- Multiply simple pairs of proper fractions [6F5a]
- Divide proper fractions by whole numbers [6F5b]
- Multiply and divide numbers by 10, 100 and 1000 [6F9a]
- Multiply a single-digit number up to 2 decimal places by a whole number [6F9b]
- Divide using decimals [6F9c]



Focus activity: Using common multiples to add and subtract mixed numbers 6C5, 6F2, 6F4

Step 1 Identify two fractions that are difficult to add or subtract, e.g. $4\frac{2}{3} + 2\frac{3}{4}$. Agree that it is easier to add or subtract fractions with the same denominator and those where one denominator is a multiple of the other. We can use equivalent fractions to give both fractions the same denominator.

Step 2 Use knowledge of the multiplication tables for 3 and 4 to identify that 3 and 4 are factors of 12, 24, 36, 48 and so on. Some children will find a multiplication square useful. The lowest common multiple is 12, so it will be helpful to convert both fractions to twelfths.

Step 3 $4\frac{2}{3} = 4\frac{8}{12}$, $2\frac{3}{4} = 2\frac{9}{12}$. Ask children to find the total and the difference of the two mixed numbers. Remind them that there is no need to change the whole number into a fraction unless the calculation requires it.

$$4\frac{8}{12} + 2\frac{9}{12} = 6\frac{17}{12} = 7\frac{5}{12} \text{ and } 4\frac{8}{12} - 2\frac{9}{12} = 2\frac{8}{12} - \frac{9}{12} = 1\frac{11}{12}$$

In this case, neither answer can be simplified using common factors.

Step 4 Challenge children to find the sum and difference of two mixed numbers where the denominators are consecutive numbers (up to 12).

Qu. No.	Question	Answer	Mark	Domain ref.	Focus activity
1	$7 \div 1 = \square$	7	1	4C6b	Y4 Autumn Test 1
2	$600 - 427 = \square$	173	1	3C2	Y3 Summer Test 1, Y6 Autumn Test 3
3	$\square = 72 \div 8$	9	1	3C6	Y3 Spring Test 5
4	$\frac{2}{5} \times 25 = \square$	10	1	3F1b	Y3 Summer Test 3
5	$25 \times 11 = \square$	275	1	4N1	Y4 Summer Test 1
6	$\square = 638 \times 7$	4466	1	4C7	Y4 Summer Test 6
7	$9523 - 3689 = \square$	5834	1	4C2	Y4 Autumn Test 4
8	$34.5 + 19.9 = \square$	54.4	1	4F8	Y4 Spring Test 5
9	$8 \times 60 = \square$	480	1	4C6b	Y4 Summer Test 2
10	$\square = 16.2 \div 10$	1.62	1	5C6b	Y5 Spring Test 5, Y6 Summer Test 2
11	$2\frac{6}{7} - 1\frac{5}{7} = \square$	$1\frac{1}{7}$	1	6F4	Y6 Spring Test 2, Y6 Spring Test 3
12	$3 + 5^2 = \square$	28	1	6C9	Y6 Autumn Test 4, Y6 Autumn Test 5
13	$4844 \div 7 = \square$	692	1	5C7b	Y5 Autumn Test 2, Y5 Summer Test 2
14	$675,424 + 673,218 = \square$	1,348,642	1	5C2	Y5 Autumn Test 3
15	$15 \times 4 \times 6 = \square$	360	1	4C6b	Y4 Summer Test 4, Y4 Summer Test 5
16	$4.79 + 6.3 = \square$	11.09	1	5F8	Y5 Spring Test 4
17	$45\% \times 300 = \square$	135	1	6R2	Y6 Summer Test 6

18	$5858 \div 5 = \square$	1171 r 3 or $1171\frac{3}{5}$ or 1171.6	1	5C7b	Y5 Summer Test 2, Y6 Summer Test 2
19	$\frac{8}{32} + \frac{1}{4} = \square$	$\frac{16}{32}$ or $\frac{1}{2}$	1	5F4	Y5 Summer Test 5
20	30% of 7000 = \square	2100	1	6R2	Y6 Summer Test 6
21	$46 \times 79 = \square$	3634	2	5C7a	Y5 Summer Test 1
22	$936 \div 36 = \square$	26	2	6C7b or 6C7c	Y6 Spring Test 6
23	$\square + 5342 = 8498$	3156	1	6C8	Y6 Autumn Test 1
24	$\frac{3}{4} \times \frac{1}{2} = \square$	$\frac{3}{8}$	1	6F5a	Y6 Summer Test 3
25	$\square = 2 - 8$	-6	1	6N5	Y6 Autumn Test 6
26	$\frac{1}{4} \div 3 = \square$	$\frac{1}{12}$	1	6F5b	Y6 Summer Test 4
27	$0.4 \times 7 = \square$	2.8	1	6F9b	Y6 Spring Test 5, Y6 Summer Test 1
28	$2\frac{1}{3} \times 5 = \square$	$11\frac{2}{3}$	1	5F5	Y5 Summer Test 6
29	$6.57 \div 9 = \square$	0.73	1	6F9c	Y6 Spring Test 6
30	$\frac{1}{3} + \frac{1}{10} = \square$	$\frac{13}{30}$	1	6F4	Y5 Summer Test 5, Y6 Spring Test 2, Y6 Spring Test 3
31	$7367 \times 59 = \square$	434,653	2	6C7a	Y6 Spring Test 4
32	$1961 \div 53 = \square$	37	2	6C7b or 6C7c	Y6 Spring Test 6
Total marks				36	