

Year 5 and 6 Addition

Pupils should be taught to:

- add numbers mentally with increasingly large numbers

$$12,563 + 300 =$$

$$27,321 + 8,000 =$$

$$32,129 + 6,040 =$$



- use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy

estimate

$$19,474 + 3,875 =$$

$$19,000 + 4,000 =$$

- solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.

- add whole numbers with more than 4 digits, including using formal written methods (column addition)

1th	Th	H	T	O	
3	4,	5	6	4	
1	8,	4	2	7	+
5	2,	9	9	1	
1					

- add decimal numbers

$$2.34 + 12.8 =$$

1	0.	t	h	
2	.	3	4	
1	2.	8	0	+
1	5.	1	4	
1				

In January, there were 34,371 new born dragons. In February, another 61,428 dragons were born. However, in March, 42,985 dragons died. How many dragons are there?

Year 5 and 6 Subtraction

Pupils should be taught to:

- subtract numbers mentally with increasingly large numbers

$$43,789 - 99 =$$

$$43,789 - 100 + 1 =$$

$$8,572 - 200 =$$

$$28,139 - 6,000 =$$



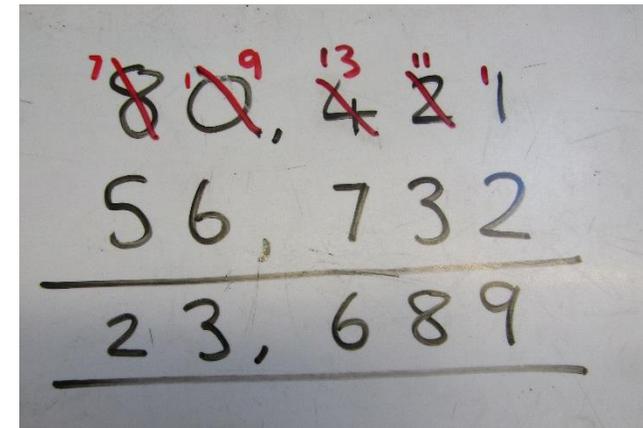
- use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy

$$\begin{array}{r}
 4 \quad 13 \\
 53,279 \\
 - 29,035 \\
 \hline
 24,244
 \end{array}$$

check by estimating
 $50,000 - 30,000 = 20,000$

On Monday, Sammy spent 86 minutes on his maths homework and 23 minutes on his reading. On Friday he spent a total of 104 minutes on his project. What is the difference in time he spent doing his homework on the two days?

- subtract whole numbers with more than 4 digits, including using formal written methods (column subtraction)



- solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.

Year 5 and 6 Multiplication



Pupils should be taught to:

- multiply numbers mentally drawing upon known facts



$$4 \times 8 = 32$$

$$4 \times 800 = 3200$$

$$0.4 \times 8 = 3.2$$

- multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers

Thousands	Hundreds	Tens	Ones	tenths	hundredths	thousandths
Th	H	T	O	t	h	th
			2	5		
	2	5	0			
$2.5 \times 100 = 250$						

- multiply whole numbers and those involving decimals by 10, 100 and 1000

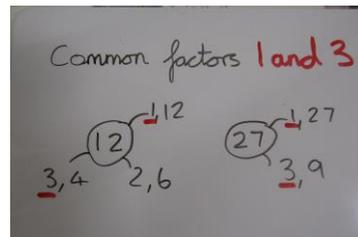
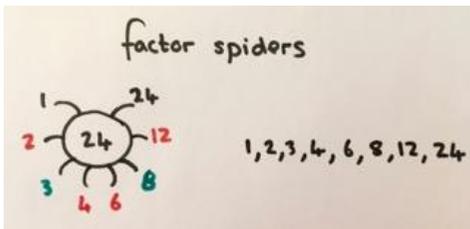
$$\begin{array}{r} 1234 \\ \times 5 \\ \hline 20 \\ 150 \\ 1000 \\ 5000 \\ \hline 6170 \end{array}$$

↓ leading to

$$\begin{array}{r} 1234 \\ \times 5 \\ \hline 6170 \\ \hline 112 \end{array}$$

$$\begin{array}{r} 4516 \\ \times 32 \\ \hline 9032 \\ 135480 \\ \hline 144512 \end{array}$$

- identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers



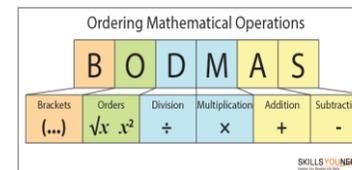
$$3^2 = 3 \times 3 = 9$$

$$5^2 = 5 \times 5 = 25$$

$$2^3 = 2 \times 2 \times 2 = 8$$

$$4^3 = 4 \times 4 \times 4 = 64$$

- recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3)



- Solve problems involving multiplication

A box contains trays of melon. There are 15 melons in a tray. There are 3 trays in a box. A supermarket sells 40 boxes. How many melons does the supermarket sell?

Year 5 and 6 Division



Pupils should be taught to:

- know and use the vocabulary of prime numbers, prime factors and composite (non-prime) numbers

A prime number is a number that is divisible by itself and one

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

- divide numbers mentally drawing upon known facts

$$15 \div 3 = 5$$

so

$$150 \div 3 = 50$$

$$1.5 \div 3 = 0.5$$

↘ ÷ by 10 ↘ ÷ by 10



- divide whole numbers and those involving decimals by 10, 100 and 1000

$$7,346 \div 100 =$$

÷ 100 move 2 places to the right

7	3	4	6
7	3	4	6

$$73.46$$

- solve problems involving division including using their knowledge of factors and multiples, squares and cubes

My age this year is a multiple of 8.
Next year it will be a multiple of 7.
How old am I?

- divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context

$$8 \overline{) 364} \text{ R}4$$

$$8 \overline{) 364} \frac{4}{8}$$

$$8 \overline{) 364.0}$$

We show remainders as: remainders, fractions and decimals.

$$17 \overline{) 2159}$$

We use the short (bus stop) and long method

$$17 \overline{) 2159} \begin{array}{l} 127 \\ -17 \\ \hline 45 \\ -34 \\ \hline 119 \\ -119 \\ \hline 0 \end{array}$$

LONG DIVISION

DAD	DIVIDE
MOTHER	MULTIPLY
SISTER	SUBTRACT
BROTHER	BRING DOWN
ROVER	REPEAT or REMAINDER

I have 254 children going on a school trip, coaches seat 54. How many coaches do I need?

There are 19 eggs how many boxes of 6 can I make?

Solve problems

