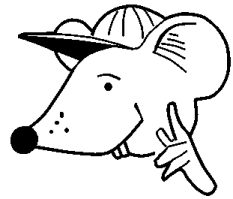# MATHEMATICS

Y6 Addition and Subtraction
6330

Use formal written methods of addition

Equipment

Paper, pencil, ruler.
Squared paper helpful.

MathSphere

Concepts

Two of the more popular methods of addition can be used for adding thousands.

Method A: where the most significant digits are added first. This is one of the most popular ways that numbers are added mentally.

Examples:	9 356		7 385
	+ 4 823		+ 8 259
	13 000		15 000
	1 100		500
	70		130
	9		14
	14 179		15 644

Method B is usually known as the 'carrying' method. This is a very popular way when using pencil and paper, starting with the units.

Examples:	8 759		7 675
	+ 2 597		+ 6 767
	11 356		14 442
	1 1 1		1 1 1

It is important during this kind of work that the children are asked to explain what they are doing and why the method works.

Addition sums are sometimes already laid out in the above way, but very often they will be presented horizontally:

e.g.   Find the total of: 56,   7 432,   340,   8 and   9 876

Presented like this many children make a mistake in setting the sum out. An important teaching point here is to make sure that the numbers are set out in careful columns - it can be a good idea to write the thousands number down in reverse order, starting with the units.

$$\begin{array}{r} 56 \\ 7\,432 \\ 340 \\ 8 \\ 9\,876 \\ \hline 17\,712 \\ \scriptstyle 1\ 2\ 2 \end{array}$$

Checking answers. On a list of additions such as this check the adding by going in the reverse direction e.g. check by adding from the bottom number up or vice versa.

Add these numbers. Check your results by adding the columns in reverse order.

1. 2 468	**2.** 3 546	**3.** 9 130	**4.** 3 528	**5.** 6 654
+ 1 357	+ 1 849	+ 4 471	+ 9 407	+ 7 071

6. 5 572	**7.** 4 709	**8.** 5 129	**9.** 8 185	**10.** 8 898
+ 8 286	+ 6 173	+ 6 632	+ 5 768	+ 4 578

Add these numbers. Remember to set them out in the same way as those above.

11. 6 548 + 9 637 =   **12.** 3 108 + 7 584 =

13. 5 952 + 3 208 =   **14.** 4 087 + 9 753 =

15. 3 039 + 7 748 =   **16.** 4 145 + 3 387 =

Calculate the answers to the following problems:

17. What is the total of 3 846 and 9 145 ?

18. In the first year of opening, a sweet shop sold 1 467 packets of crisps. In the second year 3 278 packets were sold. How many were sold in the two years?

19. The River Nile is about 6 670 km long. The River Danube is about 2 858 km long. What is the total length of the two rivers?

20. Mt Fuji, in Japan, has a height of 3 776 metres. Mont Blanc, in Europe, is 4 807 metres high. Would the combined height of the two mountains reach the summit of Mount Everest at 8 848 metres?

Add these numbers. Check your results by adding the columns in reverse order.

1. 4 241	**2.** 2 627	**3.** 1 994	**4.** 7 907	**5.** 7 620
+ 2 095	+ 9 177	+ 7 262	+ 2 879	+ 8 894

6. 5 852	**7.** 3 154	**8.** 7 688	**9.** 5 338	**10.** 6 051
+ 6 575	+ 7 956	+ 8 871	+ 8 161	+ 2 899

Add these numbers. Remember to set them out in the same way as those above.

11. 3 444 + 2 639 =   **12.** 4 164 + 9 099 =

13. 4 830 + 2 294 =   **14.** 6 669 + 1 452 =

15. 4 897 + 2 543=   **16.** 8 924 + 6 235 =

Calculate the answers to the following problems:

17. Find the total of 9 753 and 3 579.

18. Two semi finals of a basketball tournament had crowds of 4 198 and 2 779. What was the total number of spectators for the two semi finals?

19. The River Amazon, in S America, is 6 437 km long and the Mississippi, in North America is 3 778 km long. What is their combined length?

20. Snowdon is the highest mountain in Wales. It is 1 085 metres high, but Ben Nevis in Scotland is even higher, at 1 343 metres. What is their total combined height?

Take particular care that you line up the units when adding these totals together:

1.	456	**2.**	98	**3.**	2 260	**4.**	1 212	**5.**	500
	2 345		3 655		3 622		500		9 596
	8		4 001		428		2 215		8
+	3 067	+	7	+	45	+	606	+	889

6.	7 877	**7.**	570	**8.**	7 999
	221		46		266
	4 000		6 417		755
+	87	+	6	+	51

Get those units lined up!

Using the same method now try adding up these:

9. 45 + 345 + 8650 + 342 =   **10.** 6849 + 4173 + 89 +5 =

11. 131 + 7884 + 412 =   **12.** 1968 + 32 + 1969 + 12 =

Calculate the following from this table of football clubs last home games attendances:

Manchester Utd	Arsenal	Stoke City	Shrewsbury Town
53 078	48 467	12 056	3 896

13. What was the total for the gates of Manchester United and Arsenal?

14. What was the total for Arsenal and Shrewsbury Town?

15. Work out the total for all four clubs.

Remember to show all working out!

When adding using decimals it is very important that the decimal points should line up under each other.

If the sum also involves whole numbers it is a good idea to put a decimal point after the whole number followed by a zero.

Example: add 56.1 + 4.78 + 215

$$
\begin{array}{r}
56.1 \\
4.78 \\
\underline{215.00} \\
\underline{275.88}
\end{array}
$$

It is crucial that the decimal points are kept in line.

Try adding these:

1) 73.86	**2)** 567.0	**3)** 7.88	**4)** 78.60	**5)** 615.1
1.7	3.22	23.3	38.9	18.51
+ 0.68	+ 57.00	+ 45.89	+ 19.99	+ 6.33

Now try these:

  6) 0.4 + 6 + 7.49 =

  7) 0.58 + 234.1 + 76.45 =

  8) 34.01 + 256.68 + 13.95 =

  9) 16.62 + 2.26 + 198.77 =

10) 26 + 254.90 + 6.66 =

Keep your decimal points in line and you won't get caught out!

Remember to line the decimals up under each other.

If the sum also involves whole numbers it is a good idea to put a decimal point after the whole number followed by a zero.

Example: add 34.2 + 5.78 + 366

$$
\begin{array}{r}
34.2 \\
5.78 \\
\underline{366.00} \\
\underline{405.98}
\end{array}
$$

It is crucial that the decimal points
are kept in line.
The decimal point in the answer also
goes underneath the other decimal points.

Try adding these:

1) 22.34 + 56.4 + 430 =   **2)** 456.1 + 45 + 0.56 =

3) 43.88 + 0.09 + 56.35 =   **4)** 98.78 + 427 + 0.7 =

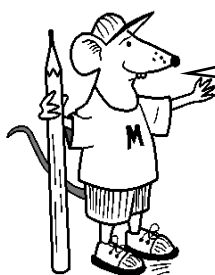**5)** 600.56 + 59.8 + 45 =   **6)** 65.5 + 11.7 + 5.61 =

7) 57.92 + 2.34 + 9.6 =   **8)** 0.95 + 0.05 + 0.4 =

9) 60 + 0.60 + 0.66 =   **10)** 305 + 3.05 + 30.5 =

Getting
easier, I
hope.

*When adding lists of
numbers look out for
pairs of numbers that
make ten.*

Add these numbers. Check your results by adding the columns in reverse order. Remember the decimal in the answer, if necessary.

1) 42.4	**2)** 3 627	**3)** 81.62	**4)** 8 877	**5)** 6.6
+ 209.5	+ 9 177	+ 4.68	+ 7 997	+ 8.46

6) 8 803	**7)** 0.07	**8)** 134.45	**9)** 47.65	**10)** 0.08
6 227	34.9	242.3	2.05	2.36
+ 1 398	+ 7.68	+ 13.98	+ 63.77	+ 8.80

Add these numbers. Remember to set them out in the same way as those above.

11) 8 202 + 7 278 =   **12)** 8 933 + 4 555 =

13) 87.18 + 23.12 =   **14)** 89.2 + 29.29 =

15) 41.11 + 78.98 =   **16)** 6.9 + 0.18 =

Calculate the answers to the following problems:

17) What is the total of   4 943   4 894   and   551 ?

18) A school has these numbers of children in its year groups.
     Year 3   145   Year 4   145   Year 5   108   Year 6   127.
     What is the total number of children in the school?

19) Sydney, in Australia has a population of 3 531 000 and Melbourne has a population of 2 965 000. What is the total population of the two cities?

20) North Island in New Zealand has an area of 114 690 sq km. South Island has an area of 150 460 sq km. What is the total area of the two islands?

Add these numbers. Check your results by adding the columns in reverse order. Remember the decimal in the answer, if necessary.

1) 56.4	**2)** 7 892	**3)** 45.82	**4)** 1 066	**5)** 4.9
+ <u>188.5</u>	+ <u>7 719</u>	+ <u>8.64</u>	+ <u>5 536</u>	+ <u>7.59</u>

6) 4 099	**7)** 7.02	**8)** 655.22	**9)** 67.85	**10)** 0.09
8 337	94.9	353.4	6.03	7.43
+ <u>9 042</u>	+ <u>9.78</u>	+ <u>90.42</u>	+ <u>88.47</u>	+ <u>0.99</u>

Add these numbers. Remember to set them out in the same way as those above.

11) 3 039 + 9 838 =   **12)** 4 409 + 6 665 =

13) 92.89 + 32.43 =   **14)** 30.9 + 2.38 =

15) 22.25 + 90.98 =   **16)** 0.7 + 8.37 =

Calculate the answers to the following problems:

17) What is the total of   7 340   5 095   and   266 ?

18) A girl went ten pin bowling. She played five games. Her scores were
    97   123   104   99   and   133.   What was her total score?

19) Arizona has a population of 3 489 000 and California has a population of 28 314 000. What is the total population of the two states?

20) The Atlantic Ocean has an area of about 82 217 000 sq. km. The Pacific is even bigger, with an area of 165 384 000 sq. km. What is the total area of the two oceans?

ANSWERS

Page 3
1) 3 825   **2)** 5 395   **3)** 13 601   **4)** 12 935   **5)** 13 725
6) 13 858   **7)** 10 882   **8)** 11 761   **9)** 13 953   **10)** 13 476
11) 16 185   **12)** 10 692   **13)** 9 160   **14)** 13 840   **15)** 10 787   **16)** 7 532
17) 12 991   **18)** 4 745 packets   **19)** 9 528 km.   **20)** 8 583 metres (no)

Page 4
1) 6 336   **2)** 11 804   **3)** 9 256   **4)** 10 786   **5)** 16 514
6) 12 427   **7)** 11 110   **8)** 16 559   **9)** 13 499   **10)** 8 950
11) 6 083   **12)** 13 263   **13)** 7 124   **14)** 8 121   **15)** 7 440   **16)** 15 159
17) 13 332   **18)** 6 977   **19)** 10 215 km.   **20)** 2 428 m.

Page 5
1) 5 876   **2)** 7 761   **3)** 6 355   **4)** 4 533   **5)** 10 993
6) 12 185   **7)** 7 039   **8)** 9 071   **9)** 9 382   **10)** 11 116
11) 8 427   **12)** 3 981   **13)** 101 545   **14)** 52 363   **15)** 117 497

Page 6
1) 76.24   **2)** 627.22   **3)** 77.07   **4)** 137.49   **5)** 639.94
6) 13.89   **7)** 311.13   **8)** 304.64   **9)** 217.65   **10)** 287.56

Page 7
1) 508.74   **2)** 501.66   **3)** 100.32   **4)** 526.48   **5)** 705.36
6) 82.81   **7)** 69.86   **8)** 1.40   **9)** 61.26   **10)** 338.55

Page 8
1) 251.9   **2)** 12 804   **3)** 86.30   **4)** 16 874   **5)** 15.06
6) 16 428   **7)** 42.65   **8)** 390.73   **9)** 113.47   **10)** 11.24
11) 15 480   **12)** 13 488   **13)** 110.3   **14)** 118.49   **15)** 120.09   **16)** 7.08
17) 10 388   **18)** 525   **19)** 6 496 000   **20)** 265 150 sq km

Page 9
1) 244.9   **2)** 15 611   **3)** 54.46   **4)** 6 602   **5)** 12.49
6) 21 478   **7)** 111.70   **8)** 1 099.04   **9)** 162.35   **10)** 8.51
11) 12 877   **12)** 11 074   **13)** 125.32   **14)** 33.28   **15)** 113.23   **16)** 9.07
17) 12 701   **18)** 556   **19)** 31 803 000   **20)** 247 601 000