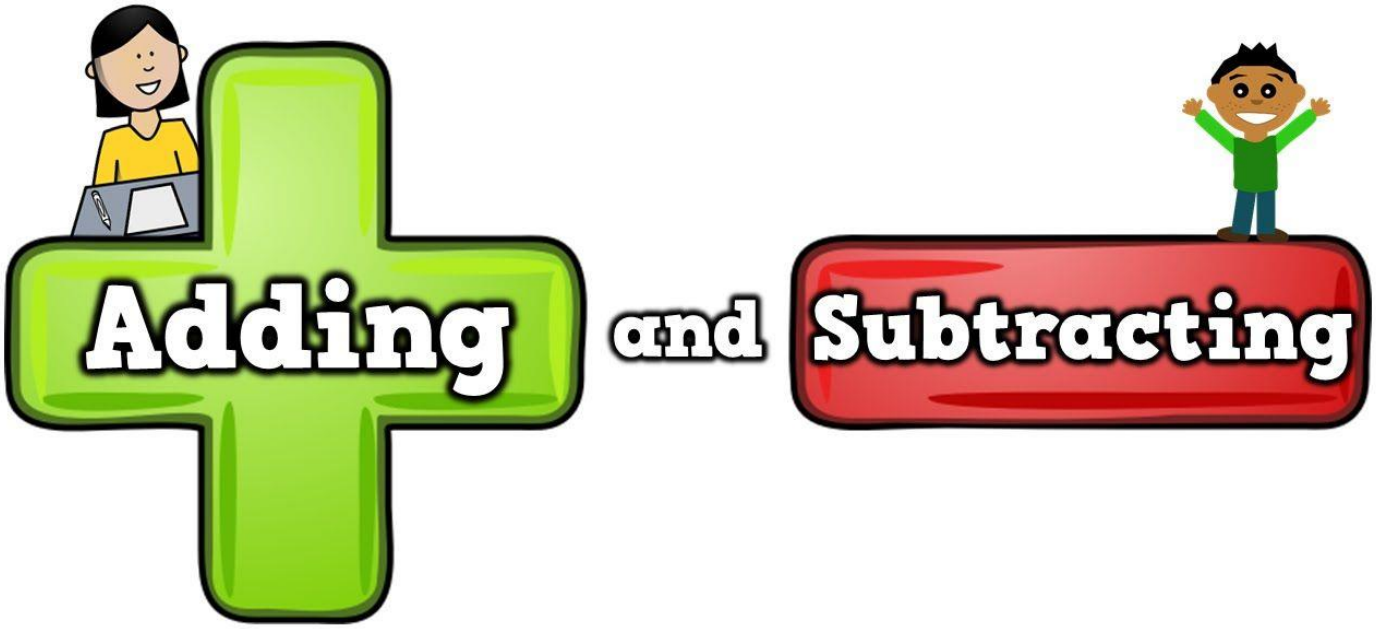
Mrs Backrath's Maths

ADDITION AND SUBTRACTION



This week we will be focusing our attention on Addition and Subtraction. All of your maths activities will be based around this topic. You will have the opportunity to practice skills you have already learnt with your teacher over the year and then use those skills to solve problems and explain your answers.

We hope you enjoy them!

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Monday 6TH July – Addition and subtraction warm up

Let's start the week off with a little warm up - complete all of the addition and subtraction questions on the next two pages and the challenges.

1 5391 + 8468 =	2 5409 + 4370 =	3 2923 + 4477 =	4 8617 + 9580 =
5 3204 + 3184 =	6 3114 + 4873 =	7 2350 + 4328 =	8 5338 + 4770 =
9 4659 + 5691 =	10 5440 + 7368 =	11 6404 + 3144 =	12 9017 + 1146 =
13 3252 + 6627 =	14 3714 + 5015 =	15 3005 + 3757 =	16 1977 + 2722 =

Challenge:

1 5__3 + _026 = 913_	2 98_0 + _382 = _9_6_	3 _6_7 + 4_74 = _020_	4 51__ + _602 = 6_46

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Adding Three 4-Digit Numbers

LO: I can add three 4-digit numbers.

1	2	3	4
9836	2547	3191	7133
1012	7999	4613	1038
+ 9278	+ 7808	+ 9695	+ 5556
5	6	7	8
4419	5706	2105	5331
2074	5292	7059	4051
+ 2077	+ 6311	+ 6434	+ 5656
9	10	11	12
6464	6533	1259	5086
1380	9498	7217	7459
+ 5044	+ 8089	+ 7831	+ 3149
13	14	15	16
4287	5140	9888	8928
6975	8004	4691	4529
+ 3366	+ 7914	+ 1551	+ 5110

Addition Pyramids

Use addition and subtraction calculations to complete these pyramids. The first one has been done for you.

1)

	1319	
681		683
254	427	211

2)

442		
400	42	178

3)

655		233
	43	

4)

231		752
	37	

5)

	389	
199		211

6)

	899	
610		
	111	

Repeated Subtraction of a Factor

The numbers on the left in circles are multiples of the number on the right in boxes – keep subtracting the number in the boxes until you reach '0'. If you don't reach 0, check your answers to find out where you went wrong. You may need to jot some calculations down.

e.g.

64 - 16 48 - 16 32 - 16 16 - 16 0 - 16

136 - 34 ○ - 34 ○ - 34 ○ - 34 ○ 34

588 ▭ ○ ▭ ○ ▭ ○ ▭ ○ 147

1488 ▭ ○ ▭ ○ ▭ ○ ▭ ○ 362

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Tuesday 7th July – Missing numbers

Calculate the missing digits in these calculations.

1.
$$\begin{array}{r} 3\,\square\,0\,0 \\ +\quad 8\,\square\,\square \\ \hline 4\,7\,0\,0 \end{array}$$

2.
$$\begin{array}{r} 4\,4\,\square\,5 \\ +\quad \square\,6\,\square \\ \hline 4\,6\,9\,0 \end{array}$$

3.
$$\begin{array}{r} 8\,4\,3\,\square \\ +\quad \square\,\square\,3 \\ \hline 8\,6\,1\,0 \end{array}$$

4.
$$\begin{array}{r} 8\,6\,\square\,7 \\ +\quad \square\,3\,\square \\ \hline 9\,4\,8\,6 \end{array}$$

5.
$$\begin{array}{r} 4\,\square\,5\,\square \\ +\quad 7\,\square\,5 \\ \hline 5\,1\,1\,9 \end{array}$$

6.
$$\begin{array}{r} 8\,2\,\square\,0 \\ +\quad \square\,0\,\square \\ \hline 9\,1\,4\,3 \end{array}$$

7.
$$\begin{array}{r} 6\,\square\,1\,1 \\ +\quad 5\,\square\,\square \\ \hline 7\,1\,8\,2 \end{array}$$

8.
$$\begin{array}{r} 6\,3\,\square\,\square \\ +\quad \square\,9\,8 \\ \hline 7\,1\,8\,4 \end{array}$$

9.
$$\begin{array}{r} 8\,\square\,0\,4 \\ +\quad 7\,\square\,\square \\ \hline 8\,8\,7\,6 \end{array}$$

10.
$$\begin{array}{r} 1\,4\,\square\,5 \\ +\quad \square\,0\,\square \\ \hline 1\,6\,0\,2 \end{array}$$

11.
$$\begin{array}{r} 8\,\square\,\square\,8 \\ +\quad 5\,8\,\square \\ \hline 8\,7\,7\,6 \end{array}$$

12.
$$\begin{array}{r} 2\,9\,\square\,8 \\ +\quad \square\,0\,\square \\ \hline 3\,7\,6\,9 \end{array}$$

13.
$$\begin{array}{r} 4\,\square\,7\,\square \\ +\quad 2\,\square\,3 \\ \hline 4\,5\,5\,6 \end{array}$$

14.
$$\begin{array}{r} 8\,4\,\square\,\square \\ +\quad \square\,7\,5 \\ \hline 9\,3\,7\,7 \end{array}$$

15.
$$\begin{array}{r} 6\,\square\,4\,5 \\ +\quad 1\,\square\,\square \\ \hline 6\,8\,7\,3 \end{array}$$

16.
$$\begin{array}{r} 6\,4\,\square\,5 \\ +\quad \square\,9\,\square \\ \hline 6\,6\,1\,1 \end{array}$$

17.
$$\begin{array}{r} 3\,\square\,\square\,1 \\ +\quad 6\,6\,\square \\ \hline 4\,5\,9\,8 \end{array}$$

18.
$$\begin{array}{r} 1\,\square\,0\,9 \\ +\quad 4\,\square\,\square \\ \hline 1\,4\,4\,2 \end{array}$$

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Calculate the missing digits in these calculations.

1.

	6	□	4	8
−		5	□	□
	6	1	4	2

2.

	8	5	□	4
−		□	0	□
	7	8	7	7

3.

	7	2	8	□
−		□	□	3
	6	4	7	0

4.

	4	8	□	0
−		□	9	□
	4	4	4	3

5.

	4	□	4	□
−		1	□	4
	4	3	5	4

6.

	8	0	□	1
−		□	1	□
	7	9	8	0

7.

	7	□	0	9
−		6	□	□
	6	5	3	2

8.

	6	8	□	□
−		□	7	1
	6	0	3	7

9.

	6	□	2	3
−		2	□	□
	5	8	7	7

10.

	2	3	□	6
−		□	1	□
	1	9	1	0

11.

	8	□	□	7
−		7	7	□
	7	2	5	7

12.

	7	6	□	3
−		□	8	□
	6	6	5	6

13.

	9	□	5	□
−		8	□	3
	8	9	1	7

14.

	5	6	□	□
−		□	6	8
	4	7	7	0

15.

	2	□	6	6
−		5	□	□
	1	6	8	5

16.

	3	3	□	7
−		□	0	□
	2	5	5	6

17.

	9	□	□	1
−		4	8	□
	9	2	4	4

18.

	1	□	0	4
−		6	□	□
		5	4	1

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Wednesday 8TH July – Choosing an appropriate method

Method	I know how to use it
In my head (counting on and back, using near 10s, near 100s, near 1000s or near doubles)	
Adding thousands, hundreds, tens and ones horizontally (by partitioning)	
Subtracting thousands, hundreds, tens and ones horizontally	
Using a blank number line (counting on or back in steps)	
Using formal column addition	
Using formal column subtraction	

Calculate the answers to the following, choosing the most appropriate method. Write the method you use, show any working, and write the answer in your book:

1. 3935 + 5711 =
2. 9983 - 5544 =
3. 8376 - 6246 =
4. 5383 + 4359 =
5. 2116 + 1222 =
6. 7166 - 1934 =
7. 8207 - 7761 =
8. 9913 + 1072 =
9. 3575 + 7049 =
10. 9584 - 8758 =

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1. Complete these calculations mentally:

421 + 50 = _____

376 + 200 = _____

250 - 99 = _____

2. Complete these calculations:

	1	3	5	7
+	2	6	4	1

	3	5	9	2
+	4	2	3	8

	7	9	8	5
-	1	3	4	2

	5	3	1	9
-	3	2	6	7

3. Complete these calculations:

3410 + _____ = 5655

6720 – _____ = 5220

4. Use appropriate calculations to solve these problems.

a) At a cinema, there is room for 750 people in a screen. If the cinema sells 641 tickets for a screen, how many are left? _____

b) In one day, 2345 people visit the cinema. 1032 of them go and see an action film and the others go and see a comedy. How many people went to see the comedy? _____

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Thursday 9th July – Estimating and using the inverse to check calculations

Remember that 'inverse' is where we use the opposite function. So if you need to check an addition calculation you can use subtraction to do this.

Estimate the missing number. Find the missing number using the inverse.

1. ____ + 2708 + 3719 = 8546
2. 3339 + ____ + 4146 = 9672
3. ____ + 2755 + 3085 = 7448
4. 2969 + 3022 + ____ = 9538
5. 2890 + ____ + 4784 = 11 031
6. 3020 + 2641 + ____ = 8863
7. 4960 + ____ + 3293 = 11 291
8. ____ + 4126 + 4841 = 9979
9. ____ + 3099 + 1681 = 8695
10. 2313 + 1480 + ____ = 9972
11. 3941 + ____ + 1569 = 8411
12. ____ + 2041 + 4361 = 10 154
13. 2097 + ____ + 2041 = 8783
14. ____ + 1884 + 2399 = 9242
15. 1924 + 3568 + ____ = 9426
16. 2609 + ____ + 4039 = 9145
17. 2221 + 3426 + ____ = 7448
18. ____ + 4687 + 1337 = 8014
19. 2273 + ____ + 2425 = 6890
20. ____ + 2697 + 4501 = 11 846
21. 1039 + ____ + 1350 = 4042
22. 3588 + 1788 + ____ = 6902
23. 2360 + ____ + 3799 = 9677
24. 2883 + 4497 + ____ = 8863
25. ____ + 4730 + 4745 = 12 926
26. 3094 + ____ + 2807 = 9248
27. 4571 + ____ + 3052 = 10 807
28. 2885 + 4343 + ____ = 9770
29. 3371 + ____ + 1770 = 9411
30. ____ + 2671 + 1524 = 5260

Estimate Answers Speed Challenge

How many points can you score on the speed challenge? Set up a countdown timer for your chosen time limit and use your rounding skills to estimate the answers to as many questions as you can. When the time is up, check that your answers were in the allowable range. Score 1 point for each accurate estimate from list 1, 2 points from list 2, 3 points for list 3 and 4 points for list 4.
No extra points for fully correct answers!
Good luck!

List 1	Estimate	List 2	Estimate	List 3	Estimate	List 4	Estimate
17+39		43+128		123+104		1523+1026	
21+48		17+162		136+153		1789+2391	
33+59		29+194		178+329		3456+4567	
39+42		34+208		346+252		4028+3876	
58+78		67+254		276+217		5997 + 4302	
29+83		89+287		302+386		4808 + 3007	
44+99		98+355		457+342		4512 + 5490	
77+89		17+578		489+512		7 + 5674	
87+92		85+475		299+992		2987 + 7561	
98+97		78+967		342+876		4813 + 8564	
Points:							

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Check the answers to these calculations using the inverse operation and mark them right or wrong!

	Calculation	Check with Inverse	Correct?
e.g.	5 5 7 - 2 7 8 (work backwards!) 2 7 7	277 + 278 = 555	Wrong!
1.	8 7 + 4 4 8 4 5 9		
2.	1 4 4 - 7 5 6 9		
3.	3 6 7 + 4 5 9 8 2 6		
4.	6 7 4 - 5 9 6 1 8 2		
5.	2 8 6 + 1 3 7 8 1 6 6 2		
6.	1 3 4 2 - 4 7 8 9 4 2		
7.	2 7 8 6 + 1 5 1 2 4 2 9 9		
8.	2 4 5 7 - 1 6 8 7 7 7 0		

Make sure to explain why a question is wrong!

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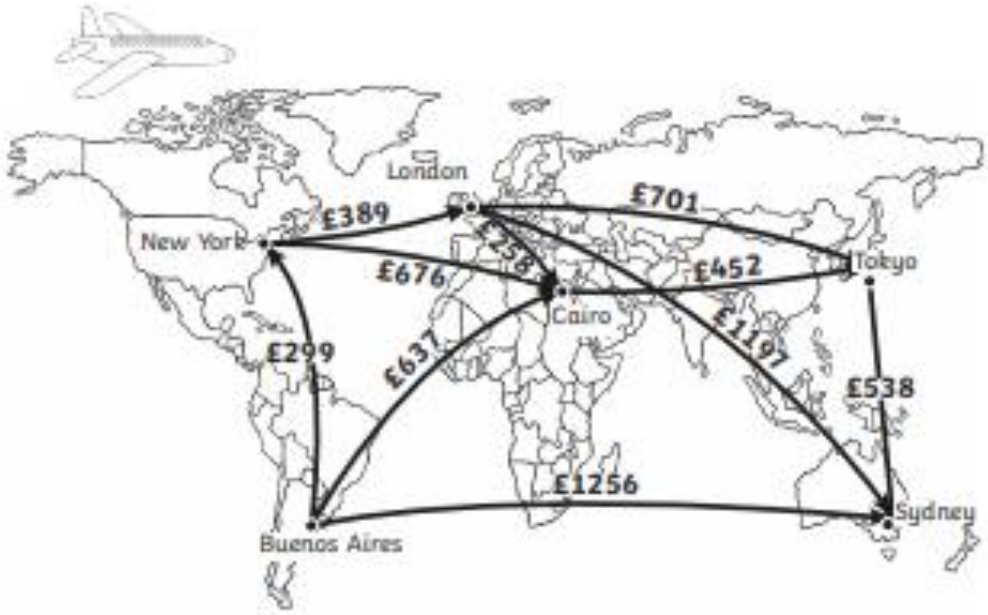
Friday 10th July – Word Problems

1. What number is three thousand and six more than four thousand, six hundred and ninety-five?
2. Subtract 6725 from 8053.
3. How much smaller is 4237 than 5138?
4. What number is four thousand, three hundred and forty more than five thousand and seventy-six?
5. Calculate the difference between three thousand, two hundred and twelve, and two thousand and forty-six.
6. Add £23.71 to £78.46.
7. What number is 5002 less than 7001?
8. Increase £76.83 by £22.71.
9. What number is the sum of six thousand and sixty and two thousand, four hundred and thirteen?
10. Decrease 2973 by 628.
11. What is added to £45.62 to make £87.00?
12. What number is four thousand, six hundred and twelve minus nine hundred and sixty?
13. Take £6712 from £8000.
14. If I increase a number by 2097 and get 4651, what number did I start with?
15. Add together 5892 and 3015, then subtract 6719.

Challenge

Using the digits 1-8, how many different ways can the digits be arranged to make 2 numbers whose sum is 9999?

Around the World Flights



1. If Kim flies from New York to Cairo via London, how much change will she get from £1000?
2. Taj wants to fly from London to Sydney via Tokyo. How much will he save if he flies direct to Sydney?
3. For business class flights the price increases by £200 per flight. How much would it cost Joy to fly business class from London to Tokyo? How much change would she get from £1000?
4. Fernando lives in Buenos Aires and wants to go on holiday to Tokyo. Which would be the cheapest route for him to take?
5. Mirai wants to get from New York to Tokyo. What is the cheapest route for her to take?
6. Richard lives in London. He wants to visit Cairo and New York and return home. He only has £1500. Can he do it and if so how much will he have left?

Solving Two Step Addition and Subtraction Word Problems

No.	Question	Calculation required (Do brackets first!)	Method	Answer
e.g.	The cinema has 700 seats. 113 adults and 276 children come to see the film. How many empty seats are there?	700 - (113 + 276)	1 1 3 + 2 7 6 3 8 9 6 9 ~~0~~ ~~0~~ - 3 8 9 3 1 1	311 seats are empty.
1.	Dorothy is saving her money for a new bike costing £286. If she has already saved £39 and is then given £59 for her birthday, how much more does she need to save?			
2.	A study of 900 people found that 687 were right handed, 174 were left handed and the remainder were ambidextrous (could use either hand). How many were ambidextrous?			

No.	Question	Calculation required (Do brackets first!)	Method	Answer
3.	The crisp factory needs to make 875 bags an hour. If a machine breaks down and the factory only makes 323 bags in one hour, how many does it need to make in the next hour to catch up?			
4.	Dave earns £1485 a month as a bus driver and his wife earns £1760 as a teacher. If Dave gets a pay rise of £217 a month how much less than his wife does he earn?			
5.	If William Shakespeare was born in 1564 and lived to be 52 years old, how many years ago did he die?			