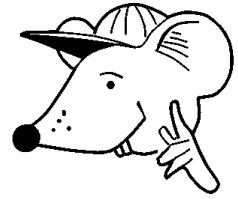


# MATHEMATICS



**N.S. Yr. 4 P.34**

**Understanding addition and its relationship  
to subtraction.**

## Equipment

Paper, pencil, calculator.

# MathSphere

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### Concepts

Children will meet a variety of vocabulary associated with addition.  
These include:

***More, add, sum, total, altogether, increase, equals, sign, inverse.***

These words should be used as often as possible.

They need to know that  $76 + 54$  is the same as  $54 + 76$   
(*this is called the commutative law, but children do not need to know the word!*)  
and that:

**$23 + 13 + 21$**  can be worked out in several different orders  
**eg  $13 + 21 + 23$**  will give the same answer as the above order.  
(*the associative law*)

It is important that children have real confidence with adding any two one digit numbers (e.g. 4 and 5 ) and that they know these in a similar way to knowing their tables. Constant recall of these simple facts will make larger mental addition much easier.

Strategies for carrying out mental addition need to be discussed frequently - for example, we often start with the tens or hundreds when calculating mentally - the opposite of what is expected when writing a sum down.

Children are also expected to understand that subtraction is the opposite of addition and that it can be used to check addition questions.

Where calculators are used the child should make an estimate of the answer first.

**Addition - mental**

**Without using a pencil and paper method, work the answers out to these three number addition problems:**

**1.**  $3 + 6 + 8$

**2.**  $7 + 5 + 2$

**3.**  $9 + 1 + 4$

**4.**  $8 + 4 + 3$

**5.**  $7 + 7 + 4$

**6.**  $5 + 3 + 3$

**7.**  $6 + 6 + 2$

**8.**  $9 + 9 + 6$

**9.**  $9 + 7 + 6$

**10.**  $1 + 8 + 8$

**11.**  $2 + 9 + 6$

**12.**  $5 + 9 + 2$

**Did you know that  $56 + 38$  is the same as  $38 + 56$ .**

**So we can write:**

$$56 + 38 = 38 + 56$$

**They both come to 94.**

**In the same way:**

$$76 + 28 = 28 + 76$$

**Fill in the gap in the sums below:**

**13.**  $53 + 16 = 16 + \boxed{\phantom{00}}$

**14.**  $94 + 18 = \boxed{\phantom{00}} + 94$

**15.**  $62 + 27 = \boxed{\phantom{00}} + 62$

**16.**  $50 + 78 = 78 + \boxed{\phantom{00}}$

This is easy!  
 $5 + 4$  is the same as  
 $4 + 5$



**Addition**

**Without using a pencil and paper method, work the answers out to these three number addition problems:**

**( You may like to time yourself, to see how quickly you can do these!)**

**1.**  $4 + 5 + 9$       **2.**  $8 + 6 + 3$       **3.**  $1 + 8 + 7$       **4.**  $9 + 5 + 4$

**5.**  $8 + 8 + 5$       **6.**  $6 + 4 + 4$       **7.**  $7 + 7 + 3$       **8.**  $8 + 1 + 6$

**9.**  $1 + 8 + 4$       **10.**  $2 + 9 + 9$       **11.**  $4 + 9 + 7$       **12.**  $6 + 1 + 3$

**Did you know that  $35 + 42$  is the same as  $42 + 35$ .**

**So we can write:**

$$35 + 42 = 42 + 35$$

**They both come to 77.**

**In the same way:**

$$67 + 89 = 89 + 67$$

**Fill in the gap in the sums below:**

**13.**  $42 + 27 = 27 + \boxed{\phantom{00}}$

**14.**  $83 + 29 = \boxed{\phantom{00}} + 83$

**15.**  $51 + 38 = \boxed{\phantom{00}} + 51$

**16.**  $49 + 59 = 59 + \boxed{\phantom{00}}$

This is easy! It is the same whichever way round you do the sum!



Addition and subtraction

Did you know that addition and subtraction are opposites?

So: if  $25 + 17 = 42$

Then:

$42 - 17$  will equal 25

and:

$42 - 25$  will equal 17

Yes! Subby is right. Try putting the correct number in the box without doing the addition or subtraction sum:

1. If  $43 + 29 = 72$  then  $72 - 43 =$

2. If  $64 + 59 = 123$  then  $123 - 64 =$

3. If  $83 + 26 = 109$  then  $109 -$    $= 83$

4. If  $62 + 49 = 111$  then  $111 -$    $= 62$

Now try these:

5. If  $98 - 25 = 73$  then  $73 + 25 =$

6. If  $76 - 59 = 17$  then  $59 + 17 =$

7. If  $91 - 43 = 48$  then  $91 - 48 =$

8. If  $49 - 37 = 12$  then  $49 - 12 =$

Investigate: try writing your own sums like the ones above. If you want you can check your results with a calculator.

Addition and subtraction

I am sure you know that  
addition and subtraction are  
opposites.

So: if  $32 + 18 = 50$

Then:

$50 - 32$  will equal 18

and:

$50 - 18$  will equal 32

**Yes! Subby is right, yet again. Try putting the correct number in the boxes below without doing the addition or subtraction sum:**

1. If  $54 + 30 = 84$  then  $84 - 54 =$

2. If  $75 + 47 = 122$  then  $122 - 75 =$

3. If  $94 + 37 = 131$  then  $131 -$    $= 94$

4. If  $73 + 52 = 125$  then  $125 -$    $= 73$

**Now try these:**

5. If  $77 - 28 = 49$  then  $28 + 49 =$

6. If  $66 - 49 = 17$  then  $49 + 17 =$

7. If  $82 - 54 = 28$  then  $82 - 28 =$

8. If  $93 - 47 = 46$  then  $93 - 46 =$

**Investigate:** try writing your own sums like the ones above. If you want you can check your results with a calculator.

### Addition

When we work out answers in our head we often do them in a different way than on paper.

Eg

$$37 + 45$$



I start with the TENS.  
30 and 40 make 70  
Add on 7 makes 77  
(I use my fingers to add on another 5  
but don't tell anyone!)  
 $77 + 5$  makes 82

Try to work all these out in your head. Only put the answer down on paper - do not do any working out on paper.

1.  $33 + 42$

2.  $54 + 23$

3.  $11 + 25$

4.  $17 + 40$

5.  $19 + 80$

6.  $35 + 35$

7.  $42 + 38$

8.  $53 + 17$

9.  $24 + 26$

10.  $55 + 25$

11.  $87 + 13$

12.  $28 + 32$

13.  $19 + 51$

14.  $48 + 7$

15.  $37 + 7$

16.  $56 + 15$

17.  $28 + 38$

18.  $37 + 27$

19.  $49 + 19$

20.  $59 + 18$

### Addition

When we work out answers in our head we often do them in a different way than on paper.

Eg

$$27 + 35$$



I start with the TENS.  
20 and 30 makes 50  
Add on 7 makes 57  
Then count on 5 more  
 $57 + 5$  makes 62

Try to work all these out in your head. Only put the answer down on paper - do not do any working out on paper.

1.  $43 + 52$

2.  $64 + 23$

3.  $41 + 35$

4.  $27 + 50$

5.  $59 + 10$

6.  $45 + 15$

7.  $12 + 68$

8.  $63 + 27$

9.  $44 + 46$

10.  $65 + 15$

11.  $47 + 43$

12.  $38 + 42$

13.  $29 + 61$

14.  $58 + 8$

15.  $27 + 9$

16.  $76 + 25$

17.  $38 + 48$

18.  $77 + 17$

19.  $59 + 29$

20.  $69 + 17$



### Addition

**Answer the questions below. Work out the sums in your head and only write down the answer.**

- |                    |                    |
|--------------------|--------------------|
| 1. 450 add 40      | 2. 260 add 30      |
| 3. 280 add 70      | 4. 560 add 60      |
| 5. add 46 to 63    | 6. add 58 to 29    |
| 7. add 35 to 56    | 8. add 29 to 49    |
| 9. 8 add 12 add 7  | 10. 4 add 9 add 13 |
| 11. 15 add 4 add 8 | 12. 18 add 6 add 7 |



Let's see how quick you are. If you want, you can time yourself for the next section.

13. What is the sum of 46 and 78 ?
14. What is the total of 63 and 29 ?
15. How many altogether are 156 and 34 ?
16. Increase 34 by 67.
17. What is the total of 23, 34 and 45 ?
18. Increase 67 by 18.
19. How many altogether are 12, 34 and 7 ?
20. What is the total of 123 and 19 ?

**Addition**

**Answer the questions below. Work out the sums in your head and only write down the answer.**

- |                    |                    |
|--------------------|--------------------|
| 1. 360 add 50      | 2. 470 add 40      |
| 3. 390 add 80      | 4. 670 add 70      |
| 5. add 57 to 48    | 6. add 69 to 18    |
| 7. add 46 to 67    | 8. add 38 to 58    |
| 9. 7 add 13 add 8  | 10. 5 add 8 add 15 |
| 11. 16 add 7 add 8 | 12. 19 add 4 add 7 |



I bet you are really quick at these now!

13. What is the sum of 57 and 84 ?
14. What is the total of 74 and 18 ?
15. How many altogether are 142 and 77 ?
16. Increase 64 by 27.
17. What is the total of 71, 4 and 25 ?
18. Increase 58 by 17.
19. How many altogether are 11, 30 and 9 ?
20. What is the total of 131 and 17 ?

### Mental Addition

**Fill in the boxes with the correct number to make these questions correct:**

1.  $28 + 9 =$

2.  $34 + 56 =$

3.   $+ 47 = 68$

4.   $+ 32 = 71$

5.  $52 +$    $= 90$

6.  $49 +$    $= 100$

Be careful ...to get the answers to some of these additions you may have to subtract! Tricky eh!



7. What is the sum of 34, 45 and 6 ?

8. Add 12 to 89.

9. How many altogether are 21, 34 and 9 ?

10. Increase 54 by 18.

11. What is the total of 44 and 66 ?

12. Find the total of 32, 43 and 8.

**Mental Addition**

**Fill in the boxes with the correct number to make these questions correct:**

1.  $47 + 6 =$

2.  $45 + 65 =$

3.   $+ 58 = 79$

4.   $+ 23 = 82$

5.  $61 +$    $= 80$

6.  $38 +$    $= 100$

Getting the idea now -  
you need to think about  
them!



7. What is the sum of 25, 42 and 5 ?

8. Add 11 to 69.

9. How many altogether are 36, 44 and 2 ?

10. Increase 62 by 28.

11. What is the total of 33 and 77 ?

12. Find the total of 51, 49 and 5.

**Addition - calculator work**

Using a calculator find the answers to the following problems:

1.  $4\,138 + 3\,570 = \boxed{\phantom{0000}}$

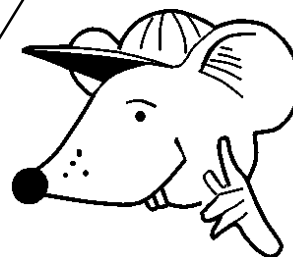
2.  $3\,893 + 6\,749 = \boxed{\phantom{0000}}$

3.  $86 + \boxed{\phantom{00}} = 144$

4.  $43 + \boxed{\phantom{00}} = 107$

5.  $23 + 34 + \boxed{\phantom{00}} = 100$

Strangely enough,  
you do not have to  
add to solve some of  
these addition  
problems!



6. Use a calculator to total up these shopping bills:

Joe's bill		Charlotte's bill	
Shirt	£ 12.95	Skirt	£ 19.99
Socks	£ 2.99	Socks	£ 3.99
Trousers	£ 29.95	Jeans	£ 29.95
Trainers	£ 49.99	Trainers	£ 39.99

7. Who spent the most money?

8. What was the total for the two bills?

**Addition - calculator work**

Using a calculator find the answers to the following problems:

1.  $5\,279 + 4\,119 = \boxed{\phantom{0000}}$

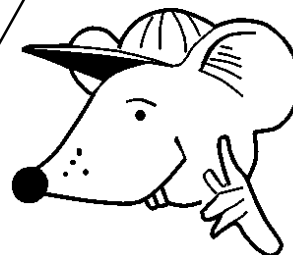
2.  $3\,799 + 1\,930 = \boxed{\phantom{0000}}$

3.  $97 + \boxed{\phantom{00}} = 154$

4.  $54 + \boxed{\phantom{00}} = 227$

5.  $34 + 45 + \boxed{\phantom{00}} = 100$

Getting the idea of these now.  
Remember to clear your calculator after each sum!



6. Use a calculator to total up these shopping bills:

Dave's bill		Carley's bill	
T-shirt	£ 5.95	Blouse	£ 15.99
watch	£12.99	T-shirt	£ 4.99
Track suit	£ 49.95	Skirt	£ 32.99
Shoes	£ 27.95	Shoes	£ 37.99

7. Who spent the most money?

8. What was the total for the two bills?

**Answers****Page 3**

1. 17   2. 14   3. 14   4. 15   5. 18   6. 11   7. 14   8. 24   9. 22   10. 17  
11. 17   12. 16   13. 53   14. 18   15. 27   16. 50

**Page 4**

1. 18   2. 17   3. 16   4. 18   5. 21   6. 14   7. 17   8. 15   9. 13   10. 20  
11. 20   12. 10   13. 42   14. 29   15. 38   16. 49

**Page 5**

1. 29   2. 59   3. 26   4. 49   5. 98   6. 76   7. 43   8. 37

**Page 6**

1. 30   2. 47   3. 37   4. 52   5. 77   6. 66   7. 54   8. 47

**Page 7**

1. 75   2. 77   3. 36   4. 57   5. 99   6. 70   7. 80   8. 70   9. 50   10. 80  
11. 100   12. 60   13. 70   14. 55   15. 44   16. 71   17. 66   18. 64   19. 68   20. 77

**Page 8**

1. 95   2. 87   3. 76   4. 77   5. 69   6. 60   7. 80   8. 90   9. 90   10. 80  
11. 90   12. 80   13. 90   14. 66   15. 36   16. 101   17. 86   18. 94   19. 88   20. 86

**Page 9**

1. 490   2. 290   3. 350   4. 620   5. 109   6. 87   7. 91   8. 78   9. 27   10. 26  
11. 27   12. 31   13. 124   14. 92   15. 190   16. 101   17. 102   18. 85   19. 53   20. 142

**Page 10**

1. 410   2. 510   3. 470   4. 740   5. 105   6. 87   7. 113   8. 96   9. 28   10. 28  
11. 31   12. 30   13. 141   14. 92   15. 219   16. 91   17. 100   18. 75   19. 50   20. 148

**Page 11**

1. 37   2. 90   3. 21   4. 39   5. 38   6. 51   7. 85   8. 101   9. 64   10. 72   11. 110   12. 83

**Page 12**

1. 53   2. 110   3. 21   4. 59   5. 19   6. 62   7. 72   8. 80   9. 82   10. 90   11. 110   12. 105

**Page 13**

1. 7 708   2. 10 642   3. 58   4. 64   5. 43   6. Joe - £95.88   Charlotte - £93.92  
7. Joe   8. £189.80 - make sure the 0 is in the pence.

**Page 14**

1. 9 398   2. 5 729   3. 57   4. 173   5. 21   6. Dave - £96.84   Carley - £91.96  
7. Dave   8. £188.80 - make sure the 0 is in the pence.