

# Year 6 Maths

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## Addition and Subtraction

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Learning From Home Activity Booklet

Statutory Requirements	Activity Sheet	Page Number	Notes
Pupils should be taught to: <ul style="list-style-type: none"> <li>• use their knowledge of the order of operations to carry out calculations involving the four operations;</li> <li>• solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why.</li> </ul>	Bodmas	2-3	
	Multistep Problems	4-5	
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# BODMAS

When completing calculations with multiple operations, there is a rule to follow to help you complete the calculation. That rule is BODMAS.

<b>B</b>	<b>Brackets</b>	$10 \times (4 + 2) = 10 \times 6 = 60$
<b>O</b>	<b>Order</b>	$5 + 2^2 = 5 + 4 = 9$
<b>D</b>	<b>Division</b>	$10 + 6 \div 2 = 10 + 3 = 13$
<b>M</b>	<b>Multiplication</b>	$10 - 4 \times 2 = 10 - 8 = 2$
<b>A</b>	<b>Addition</b>	$10 \times 4 + 7 = 47$
<b>S</b>	<b>Subtraction</b>	$10 \div 2 - 3 = 2$

BODMAS is a useful acronym that lets you know which order to solve mathematical problems. Start with anything inside the **brackets**, going from left to right. Then complete anything involving a power or a square root next (such as  $3^2$ ), again working from left to right. These are known as **orders**. After *brackets* and *order*, complete **division** and **multiplication**. As multiplication and division are ranked equally, you go from left to right in the calculation, completing each operation as it appears. Finally, complete any **addition** or **subtraction**. Again, as they rank equally, you go from left to right, completing them in the order that they appear.

- |                               |                      |                                  |                      |
|-------------------------------|----------------------|----------------------------------|----------------------|
| 1. $75 - 5 \times 5 =$        | <input type="text"/> | 6. $(9 \times 3) \div (5 + 4) =$ | <input type="text"/> |
| 2. $6 + 6 \times 6 =$         | <input type="text"/> | 7. $(4 + 7) \times 3 =$          | <input type="text"/> |
| 3. $9 \times 9 + 9 =$         | <input type="text"/> | 8. $7 + 63 \div 9 =$             | <input type="text"/> |
| 4. $45 \div (3 + 2) =$        | <input type="text"/> | 9. $63 \div (26 - 16) =$         | <input type="text"/> |
| 5. $17 \times 2 - 9 \div 3 =$ | <input type="text"/> | 10. $81 - 24 \div 6 + 3 =$       | <input type="text"/> |

**Challenge:** Now create some mixed operation calculations of your own. Do they work using **BODMAS**?

1. Compare these two calculations:

$$31 + 9 \times 7 \text{ and } (31 + 9) \times 7$$

Explain what is the same and what is different?

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2. Insert operations into the empty boxes to make these number sentences true.

$$6 \square 3 \square 7 = 16$$

$$6 \square 3 \square 7 = 25$$

$$6 \square 3 \square 7 = 9$$

3. Insert brackets in these number sentences so that these number sentences are true.

$$12 - 2 \times 5 = 50$$

$$12 - 8 - 5 = 9$$

$$10 \times 8 - 3 \times 5 = 250$$

4. Write two number sentences using the digits 2, 3, 5 and 8 before the equals sign.  
Each answer must be the same but the number sentences must be different.

# Multi-step Problems

Solve the problems below using your knowledge of addition and subtraction. Use the boxes to complete your working out.

- The prices shown below are the costs of buying these items separately at a fast food restaurant.



95p



£2.45



£1.15

You can buy all three items together in a 'joy meal' for £3.99.

**How much would you save if you bought two 'joy meals'?**

£

- Ticket prices for a local theme park are shown below.

**one day ticket:** £35.60  
**season ticket:** £125

A season ticket lets you go to the theme park as many times as you want in one year. **How many times would you have to go in one year to make the season ticket worth buying?**

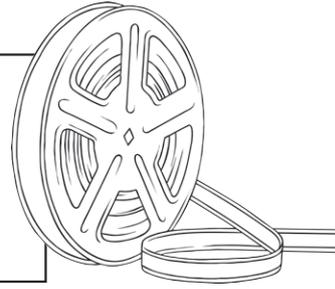
visits

3. Javeen goes to the cinema with her brother, mum and dad.  
The ticket prices are shown below.

**adult ticket:** £12.45

**child ticket:** £7.25

**family ticket** (two adults, two children): £30.00



Javeen's dad buys a family ticket. **How much does he save doing this?**

£

4. Here are the viewing figures for two weekend TV shows.

TV Show	Saturday's Viewing Figures	Sunday's Viewing Figures
Dancing on Feet	3 236 874	5 468 698
The Next Big Voice	4 435 497	3 954 384

**Which show had the most viewing figures altogether?**  
**How many more viewers did it receive?**



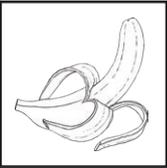
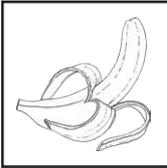
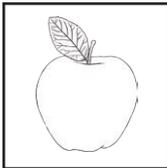
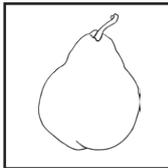
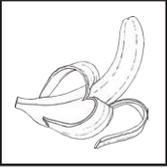
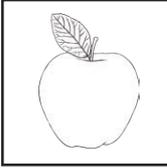
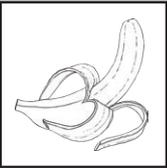
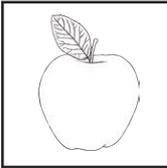
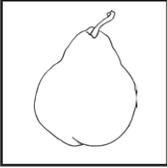
# Puzzles

1.  $x$  and  $y$  represent whole numbers. Their sum is 1000.  $x$  is 250 more than  $y$ .

**What are the values of  $x$  and  $y$ ?**

$x =$                        $y =$

2. Look at the following picture calculations. **Calculate the value of each fruit item, and then complete the final calculation.**

	+		= 840			-		= 35
	+		= 563					
	+		+		=	<div style="border: 1px solid black; width: 60px; height: 60px; display: inline-block;"></div>		

Use this box for your working out.

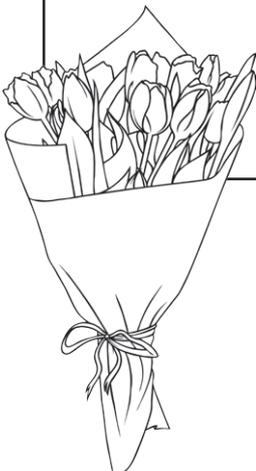
# Reverse Problems

1. Sarah is thinking of a number. She adds 376 to the number then subtracts 231. Her answer is 568. **What number did she start with?**

2. Yan thinks of a number. He subtracts 24.9 and then adds 49.8. His answer is 738.4. **What number did he start with?**

3. John works in a flower shop. A customer pays him £23.89 for some flowers which John puts in the till. Later, he takes £13.48 from the till. There is now £59.27 in the till. **How much was in the till to start with?**

£



# Parent Guide to Addition and Subtraction

In the Year 6 National Curriculum, children are expected to apply their knowledge their knowledge of addition and subtraction to a range of problems. In previous years, children are taught to use the column method for addition and subtraction (including large numbers and decimal numbers) which they should apply (when appropriate) to complete problems.

## The Column Method

The column method of addition and subtraction is so called because it sets the numbers out into columns based on their place value, e.g. **Hundreds, Tens, Ones**, tenths etc. (**Note:** If your child isn't secure with place value, it is best to go over this before completing column addition and subtraction.) To begin this method, we always start by adding or subtracting the numbers in the right column and then work along to the left, adding or subtracting the numbers in that column.

When using column subtraction, the **largest number** is always placed above the **smaller number**. Also, you must always subtract the digit below from the number above; this is sometimes a common misconception with children as they sometimes calculate the difference between the two numbers.

$$\begin{array}{r}
 2568 \\
 + 3251 \\
 \hline
 5819 \\
 \hline
 \end{array}$$

1

$$\begin{array}{r}
 5 \overset{5}{\cancel{0}} \overset{1}{2} 8 \\
 - 3274 \\
 \hline
 2354 \\
 \hline
 \end{array}$$

**Borrowing vs Exchanging:** During school, you were probably taught to 'borrow' from the next column if you couldn't subtract the bottom number from the top number in a column. However, the current term used is **exchanging** for this procedure. It is best to talk to the classroom teacher to ensure you are consistent with the terminology used in the classroom.