

# Homework/Extension

## Step 8: Efficient Subtraction

### National Curriculum Objectives:

Mathematics Year 4: (4C2) [Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate](#)

Mathematics Year 4: (4C3) [Estimate and use inverse operations to check answers to a calculation](#)

Mathematics Year 4: (4C4) [Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why](#)

### Differentiation:

Questions 1, 4 and 7 (Varied Fluency)

**Developing** Identify the most efficient method of subtraction. Includes comparing two methods of subtraction, with two 3-digit numbers and no exchanging.

**Expected** Identify the most efficient method of subtraction. Includes two 4-digit numbers, with exchanges.

**Greater Depth** Identify the most efficient method of subtraction. Includes 3-digit numbers from a 4-digit number, with exchanges.

Questions 2, 5 and 8 (Varied Fluency)

**Developing** Match subtractions to the most efficient method and calculate. Includes comparing two methods of subtraction, two 3-digit numbers and no exchanging.

**Expected** Match subtractions to the most efficient method and calculate. Includes two 4-digit numbers, with exchanges.

**Greater Depth** Match subtractions to the most efficient method and calculate. Includes 3-digit numbers from a 4-digit number or 4-digit numbers from a 4-digit number, with exchanges.

Questions 3, 6 and 9 (Reasoning and Problem Solving)

**Developing** Explain why one method is more efficient than another. Includes comparing two methods of subtraction, two 3-digit numbers and no exchanging.

**Expected** Explain why one method is more efficient than another. Includes two 4-digit numbers, with exchanges.

**Greater Depth** Explain why one method is more efficient than another. Includes 3-digit numbers from a 4-digit number, with exchanges. Includes multi-step subtractions.

More [Year 4 Addition and Subtraction](#) resources.

Did you like this resource? Don't forget to [review](#) it on our website.

# Efficient Subtraction

1. Use the different methods below to solve  $893 - 251$ . Tick the one that is the most efficient.

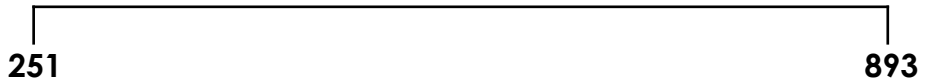
A.

Subtract using the column method.

B.

Count on using a number line.

-			



VF  
HW/Ext

2. Match each subtraction to the most efficient method and calculate the answer.

count on

A.  $419 - 399 =$

add 1 to both numbers

B.  $242 - 212 =$



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3. Below are two different methods used to calculate  $899 - 699$ . Complete both.

A.

	8	9	9
-	6	9	9

B.

	9	0	0
-	7	0	0

Explain why method B is more efficient than A.



RPS  
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# Efficient Subtraction

4. Use the different methods below to solve  $5,354 - 3,295$ . Tick the one that is the most efficient.

A.

Subtract using the column method.

B.

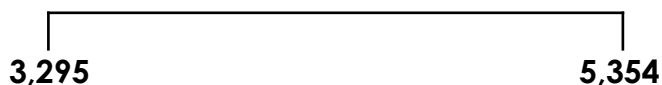
Add 5 to both numbers first.

C.

Count on using a number line.

-				

-				



VF  
HW/Ext

5. Match each subtraction to the most efficient method and calculate the answer.

column method

A.  $4,782 - 2,999 =$

add 1 to both numbers

B.  $5,895 - 5,815 =$

count on

C.  $7,358 - 3,634 =$



VF  
HW/Ext

6. Below are two different methods used to calculate  $5,345 - 4,995$ . Complete both.

A.

	5	3	4	5
-	4	9	9	5

B.

	5	3	5	0
-	5	0	0	0

Explain why method B is more efficient than A.



RPS  
HW/Ext

# Efficient Subtraction

7. Use the different methods below to solve  $4,556 - 499$ . Tick the one that is the most efficient.

A.

Subtract using the column method.

B.

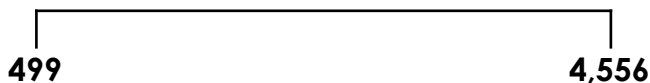
Add 1 to both numbers first.

C.

Count on using a number line.

-					

-					



VF  
HW/Ext

8. Match each subtraction to the most efficient method and calculate the answer.

take 1 from both numbers

A.  $6,781 - 1,564 =$

add 25 to both numbers

B.  $7,000 - 691 =$

column method

C.  $1,625 - 475 =$



VF  
HW/Ext

9. Oscar has £4,000. He buys a games console for £460 and a controller for £39. How much money does he have left? Use both methods below to solve the problem.

A. Add the cost of the console and the controller together, then subtract from the amount he had to begin with.

+			

-			

B. Add the two items together. Take 1 off that total and off the amount of money he had at the start. Now subtract those amounts.

+			

-			

Explain which method is most efficient and why.



RPS  
HW/Ext

## Homework/Extension Efficient Subtraction

### Developing

1.  $893 - 251 = 642$ . A is the most efficient method.
2. A = 20 (add 1 to both numbers); B = 30 (count on)
3. A.  $899 - 699 = 200$ ; B.  $900 - 700 = 200$

Method B is more efficient because 1 has been added to both numbers, so only the hundreds need subtracting.

### Expected

4.  $5,354 - 3,295 = 2,059$ . B is the most efficient method.
5. A = 1,783 (add 1 to both numbers); B = 80 (count on); C = 3,724 (column)
6. A.  $5,345 - 4,995 = 350$ ; B.  $5350 - 5,000 = 350$

Method B is more efficient because 5 has been added to both numbers, eliminating the need to exchange when completing the calculation.

### Greater Depth

7.  $4,556 - 499 = 4,057$ . B is the most efficient method.
8. A = 5,217 (column); B = 6,309 (take 1 from both numbers); C = 1,150 (add 25 to both numbers)
9. B is more efficient as it's easier to calculate  $\text{£}3,999 - \text{£}498$ , than  $\text{£}4,000 - \text{£}498$ . It eliminates the need to exchange. Oscar will have  $\text{£}3,501$  left.