Green
Efficient subtraction

Which method is the most efficient?

390 – 310 = ☐

column method | count on in tens

Which method is the most efficient?

965 – 342 = ☐

column method | count on in tens

True or false? Counting on in hundreds to find the difference would be an efficient method of solving this calculation.

845 – 345

True or false? Adding one to both numbers before using a mental method would be an efficient method of solving this calculation.

799 – 399

285 people are on the beach. 132 of them leave. How many people are left?

- **Count on in twos.**
- **Use a column method.**

Which is the most efficient method?

There are 845 trees in a forest. 820 are chopped down. How many trees are left?

- **Use a column method.**
- **Find the difference by counting in fives.**

Which is the most efficient method?

Which method would you use for each calculation?

896 – 351

782 – 732

Counting On	
Column Method	

Which method would you use for each calculation?

247 – 147

582 – 370

Partition	
Counting On	

Yellow
Efficient subtraction

Check the calculation below.

	4	5 (4)	2 (11)	3 (1)
–	2	4	9	8
	2	0	2	5

Is this method efficient?

What could be added to both numbers to make it more efficient?

Check the calculation below.

	6 (5)	0 (1)	0 (9)	0 (1)
–	3	5	4	7
	2	4	5	3

Is this method efficient?

What could be subtracted from both numbers to make it more efficient?

Colin says,

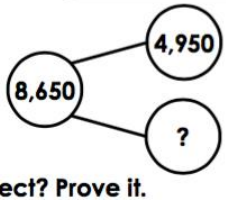
An efficient way of completing this calculation is to count on.

7,452	
?	7,390

Is he correct? Prove it.

Ellie says,

An efficient way of completing this calculation is to add 50 to both numbers.



Is she correct? Prove it.

The children are solving this subtraction: 1,250 – 1,197.

Jess: I'll use the column method.

Luke: I will add 3 to both numbers and count on.

Complete the calculations using both the suggested methods.
Which was quickest? Why?

The children are solving this subtraction: 7,283 – 5,979.

Colin: I will add 1 to both then partition.

Faith: I'll use the column method.

Complete the calculations using both the suggested methods.
Which was quickest? Why?

Which method is the most efficient?

6,000 – 4,584 = ☐

partition | take one off both | count on

Which method is the most efficient?

1,530 – 1,470 = ☐

count on | column method | take one off both

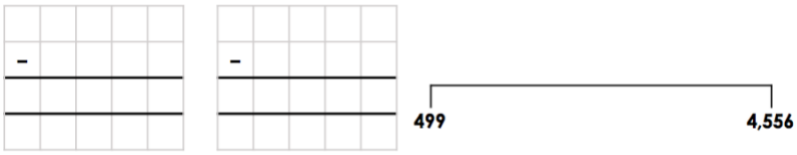
Red
Efficient subtraction

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.



Complete the calculation choosing the most efficient method.

1,025 – 995 = ☐

count on | column method | partition

Sort the calculations by choosing the most efficient method. Then complete the calculation using the method chosen.

partition | column | difference

8,000 – 2,754	6,135 – 2,496	
4,736 – 2,958	7,853 – 2,550	
9,200 – 3,716	3,889 – 2,850	
	4,000 – 1,382	7,612 – 4,923

Complete the calculation choosing the most efficient method.

5,789 – 399 = ☐

take one off both | add one to both | count on

Match the calculations with the most efficient method.

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 = ☐

Leon says,

An efficient way of completing the problem is to calculate the total cost of the furniture, then count on in hundreds to find out how much money she has left.

Holly has £3,500. She buys a sofa for £2,156 and a chair for £644. How much does she have left?

Is he correct? Prove it.

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.

Amy says,

An efficient way of completing the problem is to find the total cost of the items, then use a column method to subtract it from the amount he started with.

Arthur has £4,000. He buys a bike for £869 and a skateboard for £128. How much does he have left?

Is she correct? Prove it.

Green Answers
Efficient subtraction

Which method is the most efficient?

Count on in tens as both numbers are multiples of ten. 390 – 310 = 80.

390 – 310 = ☐

column method | count on in tens

Which method is the most efficient?

965 – 342 = ☐

Column method as neither number is a multiple of 10 and they are too far apart to count in tens. 965 – 342 = 623.

True or false? Counting on in hundreds to find the difference would be an efficient method of solving this calculation.

845 – 345

True

True or false? Adding one to both numbers before using a mental method would be an efficient method of solving this calculation.

799 – 399

True

285 people are on the beach. 132 of them leave. How many people are left?

- Count on in twos.
- Use a column method.

285 – 132 = 153. Use a column method as only one number is a multiple of two and they are too far apart.

There are 845 trees in a forest. 820 are chopped down. How many trees are left?

- Use a column method.
- Find the difference by counting in fives.

845 – 820 = 25. Both numbers are close together and are multiples of five, so finding the difference by counting on in fives would be efficient.

Which method would you use for each calculation?

896 – 351

782 – 732

Counting On	782 – 732
Column Method	896 – 351

Which method would you use for each calculation?

247 – 147

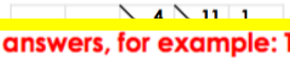
582 – 370

Partition	582 – 370
Counting On	247 – 147

Yellow

Efficient subtraction

Check the calculation below.



Various answers, for example: The method is not efficient. Adding 2 to both numbers would make the calculation more efficient.
4,525 – 2,500 is easier to calculate than 4,523 – 2,498.

Is this method efficient?

What could be added to both numbers to make it more efficient?

Check the calculation below.

Various answers, for example: The method is not efficient. Subtracting 1 from both numbers would make the calculation more efficient.
5,999 – 3,546 is easier to calculate than 6,000 – 3,547.

Is this method efficient?

What could be subtracted from both numbers to make it more efficient?

Colin says,

An efficient way of

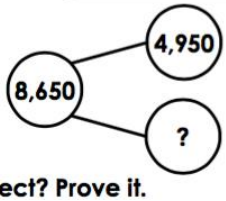
He is correct because the numbers are close together. Adding 10 more to 7,390 would make 7,400, then count on 52. The answer is 62.

?	7,390

Is he correct? Prove it.

Ellie says

She is correct because adding 50 to both numbers will create 8,700 – 5,000 and there will be no exchanges. The answer is 3,700.



Is she correct? Prove it.

The children are solving this subtraction: 1,250 – 1,197.

Luke's method should be quicker as his calculation requires no exchanging.

I will add 3 to both numbers and count on.

Luke

Complete the calculations using both the suggested methods.
Which was quickest? Why?

The children are solving this subtraction: 7,283 – 5,979.

I will add 1 to both then partition.

Faith's method should be quicker as Colin will still have to exchange.

Faith

Complete the calculations using both the suggested methods.
Which was quickest? Why?

Which method is the most efficient?

Take one off both numbers, then use the column method. This eliminates the need to exchange. 5,999 – 4,583 = 1,416.

partition | take one off both | count on

Which method is the most efficient?

Counting on, as the numbers are close together and it would be possible to count on in tens. 1,530 – 1,470 = 60.

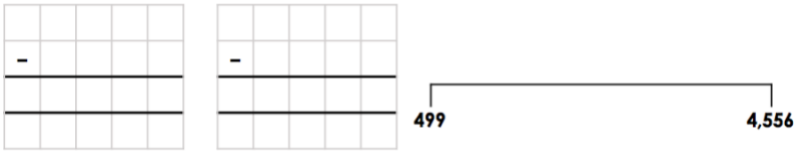
count on | column method | take one off both

Red Answers
Efficient subtraction

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

4,556 – 499 = 4,057. B is the most efficient method.

column method. | numbers first. | number line.



Complete the calculation choosing the most efficient method.

Counting on in tens would eliminate the need to exchange. 1,025 – 995 = 30.

count on | column method | partition

Sort the calculations by choosing the most efficient method. Then complete the calculation using the method chosen.

partition	column	difference
3,889 – 2,850 = 1,039	7,612 – 4,923 = 2,689	4,000 – 1,382 = 2,618
7,853 – 2,550 = 5,303	6,135 – 2,496 = 3,639	9,200 – 3,716 = 5,484
	4,736 – 2,958 = 1,778	8,000 – 2,754 = 5,246

Complete the calculation choosing the most efficient method.

Adding one to both numbers eliminates the need to exchange. 5,790 – 400 = 5,390 could then be completed mentally.

take one off both | add one to both | count on

Match the calculations with the most efficient method.

A = 5,217 (column); B = 6,309 (take 1 from both numbers); C = 1,150 (add 25 to both numbers)

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 = ☐

Leon says,

An efficient way of completing the problem is to calculate the total cost of

He is correct. The items cost £2,800 in total. It should be easy to count on in hundreds to £3,500. The answer is £700.

Holly has £3,500. She buys a sofa for £2,156 and a chair for £644. How much does she have left?

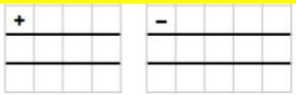
Is he correct? Prove it.

B is more efficient as it's easier to calculate £3,999 – £498, than £4,000 – £498. It eliminates the need to exchange. Oscar will have £3,501 left.

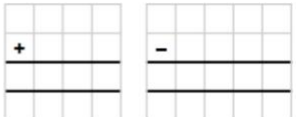
Amy says,

An efficient way of completing the problem is to find the total cost of the items, then use a column method to subtract it from the amount he started with.

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.

She is incorrect because a column method would result in lots of exchanges. She should add 3 to 997 and then count on in 1000's. The answer is £3,003.