Mathematics at

SUBTRACTION

The vocabulary of subtraction

Take away

How many are left?

decrease

Less than

How much more is ___than ___?

-

minus

subtract

What is the difference between ___ and ___ ?

Objectives

Lower Foundation Phase:

In practical activities and discussion, begin to use the vocabulary associated with subtracting.
Find 'one less than' a number.
Begin to relate subtracting to 'taking away'.

Upper Foundation Phase:

Count back in ones from a small number.
Count back in tens from larger numbers.
Within the range 0-30, say the number that is 1 or 10 less than a given number.
Understand the operation of subtraction (as 'take away' or 'difference')
Know by heart all pairs of numbers with a total of ten.
Use mental strategies to solve simple problems using subtraction.
Explain methods and reasoning orally.
Understand that subtraction is the inverse of addition and begin to explain the subtraction that corresponds to a given addition e.g. 6 add 4 is 10 so 10 take away 4 is 6.
Know by heart all subtraction facts to at least 10.

Lower Key Stage 2

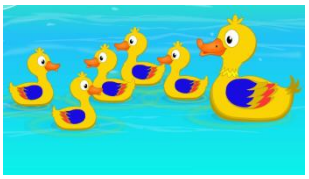
Know by heart all subtraction facts for each number to 20.
Subtract mentally a near multiple of 10 from a number.
Use known number facts and place value to subtract mentally, including any pair of 2 digit numbers.
Carry out column subtraction of 2 integers less than 1000.
Check answers using inverse operations

Upper Key Stage 2

Calculate mentally a difference such as 8006 – 2993.
Carry our column subtraction of positive integers less than 10000.
Carry out column subtraction of numbers involving decimals.
Subtract totals less than £100 using correct notation, e.g. £28.18 + £33.45
Check answers using inverse operations
Estimate by rounding to the nearest 10, 100, 1 000 or whole number

Lower Foundation Phase

Reciting number names in order, counting back.
e.g. "Five little ducks went swimming one day…"



Relate subtraction to taking away and counting how many more are left.
e.g. We ate two of our six jelly beans – How many are left?

Count 1,2,3,4,5,6. *Take away 2…there are 1,2,3,4 left.*

Remove a smaller number from a larger number and find out how many are left by counting back.
e.g. You have 8 pennies. Spend 3 pennies. How many do you have left?
Count back 3 from 8
8*….7….6…..5* *Say together 8 take away 3 is 5*

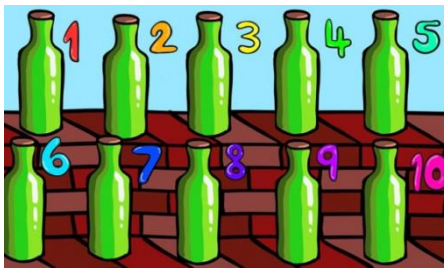
Begin to find out how many have been removed from a larger group by counting **up** from a number.
e.g. There were 10 books on this shelf. There are only 7 now. How many have gone?
Count up from 7 to 10 *… 8, 9, 10 and say 3.*
Say 3 and 7 is 10 so 10 take away 3 is 7.

Work out by counting **how many more** are needed to make a larger number.
e.g. A lolly costs 6p. How much change do you get from 10p?
Count up from 6 to 10 ….7,8,9,10 and say 4.
Say 4 and 6 makes 10 so 10 take away 4 is 6.

Using our fingers.
e.g. what's ten take away 2?

Upper Foundation Phase

Reciting number names in order, counting back to zero.
e.g. “Ten green bottles ….”



Counting back using a number track or number line.
e.g. How much bigger is 26 than 23?

21	22	23	24	25	26	27

Count back from 26 to 23….how many did you count?
All say 3…26 is 3 more than 23
26 take away 3 is 23

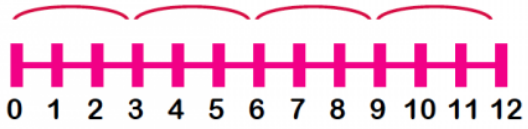
Recognise that symbols stand for numbers.
e.g. 5 - △ = 3 or ◇ -1 =2

Use patterns of similar calculations.
e.g. 10 – 0 = 10, 10 – 1 = 9, 10 – 2 = 8, 10 – 3 = 7

Subtract a single digit number from a larger number.
e.g. 17 – 5 = □ 17 - □ = 12 □ - 5 = 12

gradually building to:
60 – 7 =
23 – 6 =
37 – 12 =

Describe and extend a number sequence.
e.g. 12, 9, 6 …..



Using a 100 square.
e.g. 25 take away 12
…is the same as
25 take away 10 and then take away 2

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

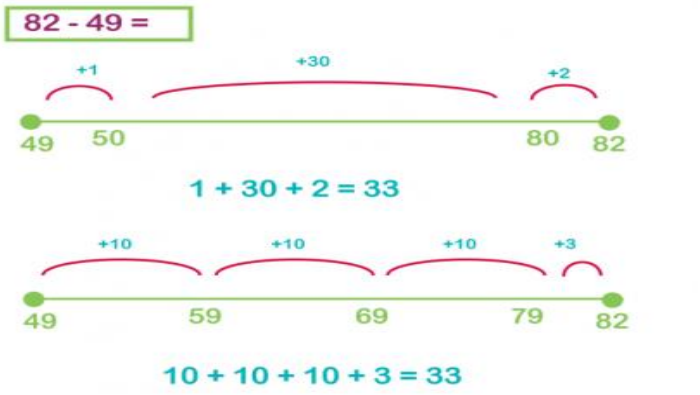
Lower Key Stage 2

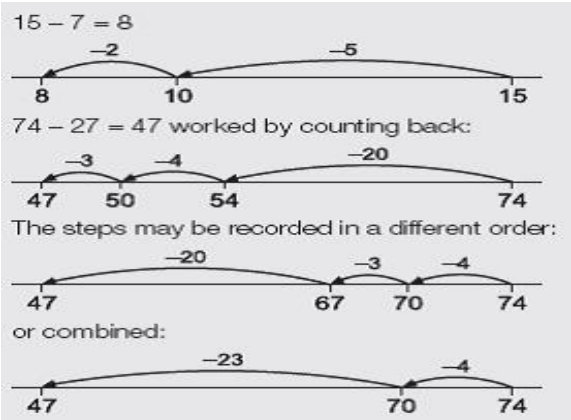
Mental strategies include knowing:
e.g. 1 , 10 or 100 less than a given number.

Understand that:
e.g. 41 – 35 is different from 35 – 41

also, 41 – 35 = ◇ *so ◇ + 35 = 41* *and 45 - ◇ =35*

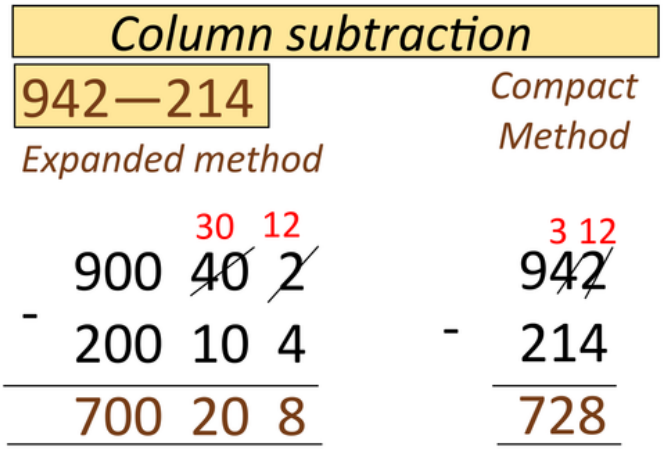
Using number lines to count on





Using number lines to count back

Using column subtraction (expanded and compact methods)

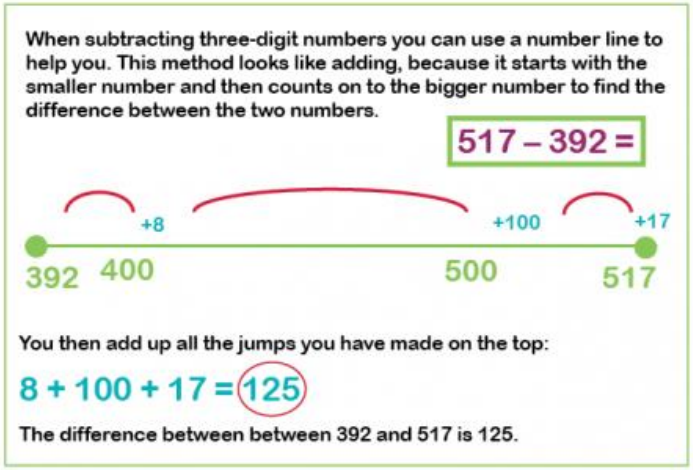


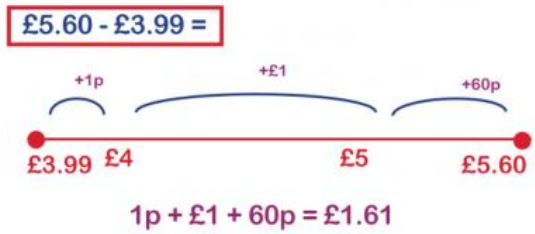
Upper Key Stage 2

Continue to use both number lines and written methods to subtract numbers with an increasing number of digits extending to decimals.

Using number lines (Counting on)

e.g. to subtract 3 or 4 digit numbers

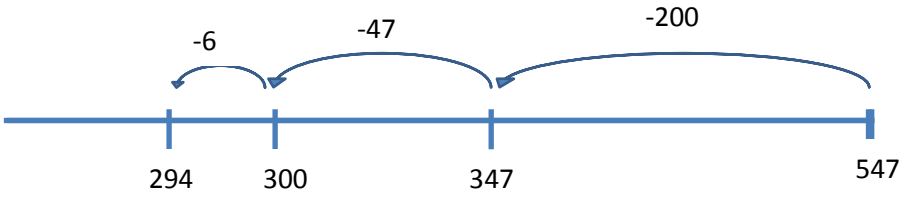




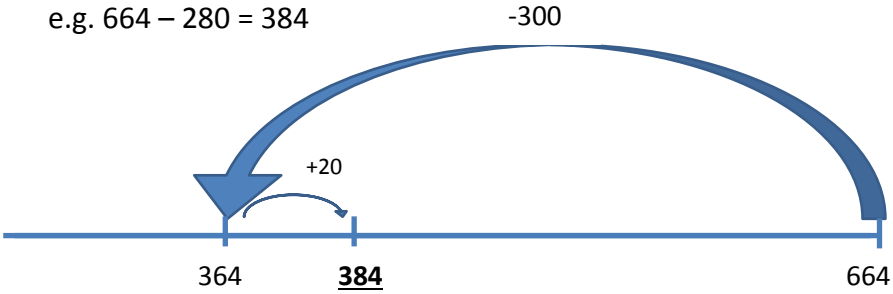
e.g. Subtracting money

Using number lines (Counting back)

e.g. 547 – 253 = 294



e.g. 664 – 280 = 384



Using column subtraction

e.g. to subtract 3, 4 or 5 digit numbers or decimals (including money)

- Use column subtraction to subtract numbers with up to five digits, including exchanging where necessary.

```
  11
 12345-
   631
 11714
```

3.8 - 1.26

```
  3.80
- 1.26
```

Stick a zero in there so you can do your borrowing (regrouping)!

```
    7 10
  3.8 0
- 1.2 6
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  2.54
```
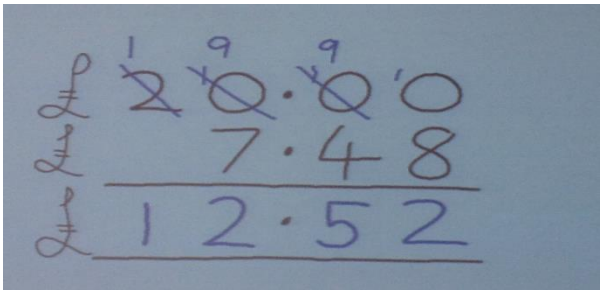

Follow these rules

→ Find the decimal
→Line up decimals
→Fill in empty spots with zeros
→Add or Subtract
→It's that easy!!!!!!!

e.g. If Nicki goes shopping and spends £7.48 on groceries, how much change will she receive is she pays with a £20.00 note?

£20.00 - £7.48



Estimating solutions

e.g. 472 – 398 estimate 472 – 400 = 72

when rounded to the nearest 10 is 400 so, estimate an answer by subtracting 400.