

Year 6 SATs Booster

Maths 2

Addition and Subtraction Part 1

Objectives:

Use known number facts and place value to help with, and speed up, mental addition/subtraction.

Vocabulary:

digit

less than

sum

difference

more than

Addition

How would you add together

24 and 37 in your head?

$24 + 37$

Here is one way of doing it. You could partition the numbers.

$$**24 = 20 + 4 \quad 37 = 30 + 7**$$

Add the tens

Then add the units

Then add the answers together

$$**30 + 20 = 50**$$

$$**7 + 4 = 11**$$

$$**50 + 11 = 61**$$

$$**So $24 + 37 = 61$**$$

24 + 37

Here is another way of doing it.

$$24 + 37$$

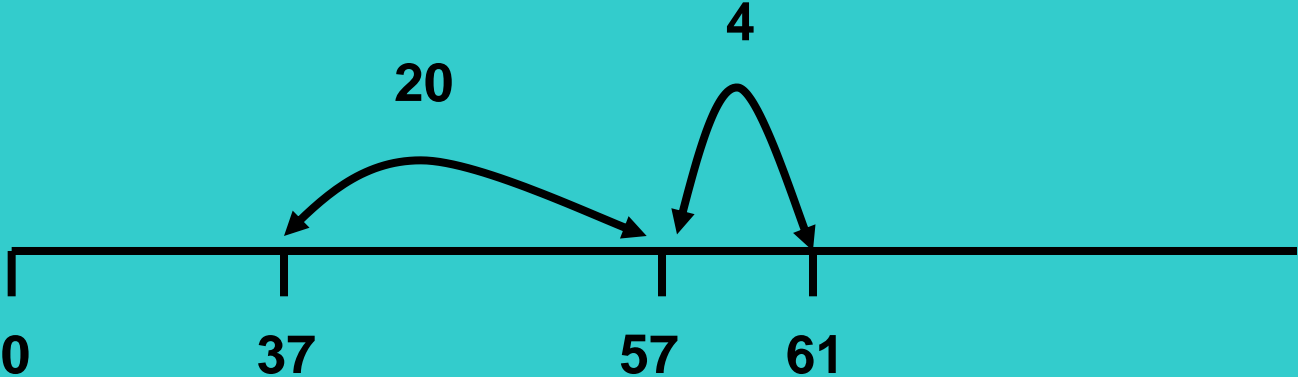
$$=37 + 24$$

$$=37 + 20 + 4$$

$$=57 + 4$$

$$= 61$$

Using a number line.



$$24 + 37$$

Another way.

$$37 + 24$$

$$= 37 + 4 + 20$$

$$= 41 + 20$$

$$= 61$$

$$24 + 37$$

$$= 37 + 24$$

$$= 37 + 23 + 1$$

$$= 60 + 1$$

$$= 61$$

It doesn't matter **how you do
it as long as you get the right
answer.**



Some addition calculations ...

Put the digits 7, 3 and 4 in the boxes to complete the calculation.

$$\begin{array}{|c|c|} \hline & \\ \hline \end{array} + \begin{array}{|c|} \hline \\ \hline \end{array} = 41$$

Put the digits 7, 3 and 4 in the boxes to complete the calculation.

$$\begin{array}{|c|c|} \hline & \\ \hline \end{array} + \begin{array}{|c|} \hline \\ \hline \end{array} = 41$$

**Write 4 digits in the boxes.
Put one digit in each box.**

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+

--	--

=

56

**Write 4 digits in the boxes.
Put one digit in each box.**

--	--

+

--	--

=

61

**Use the digits 6, 3, 4 and 9.
Put one digit in each box to make the
calculation correct.**

$$\begin{array}{|c|c|} \hline & \\ \hline \end{array} + \begin{array}{|c|c|} \hline & \\ \hline \end{array} = 85$$

**Use the digits 8, 5, 6 and 2.
Put one digit in each box to make the
calculation correct.**

$$\begin{array}{|c|c|} \hline & \\ \hline \end{array} + \begin{array}{|c|c|} \hline & \\ \hline \end{array} = 93$$

Give two possible answers to this calculation.

$$\square + \square + \square = 800$$

Give two possible answers to this calculation.

$$\square + \square + \square = 450$$

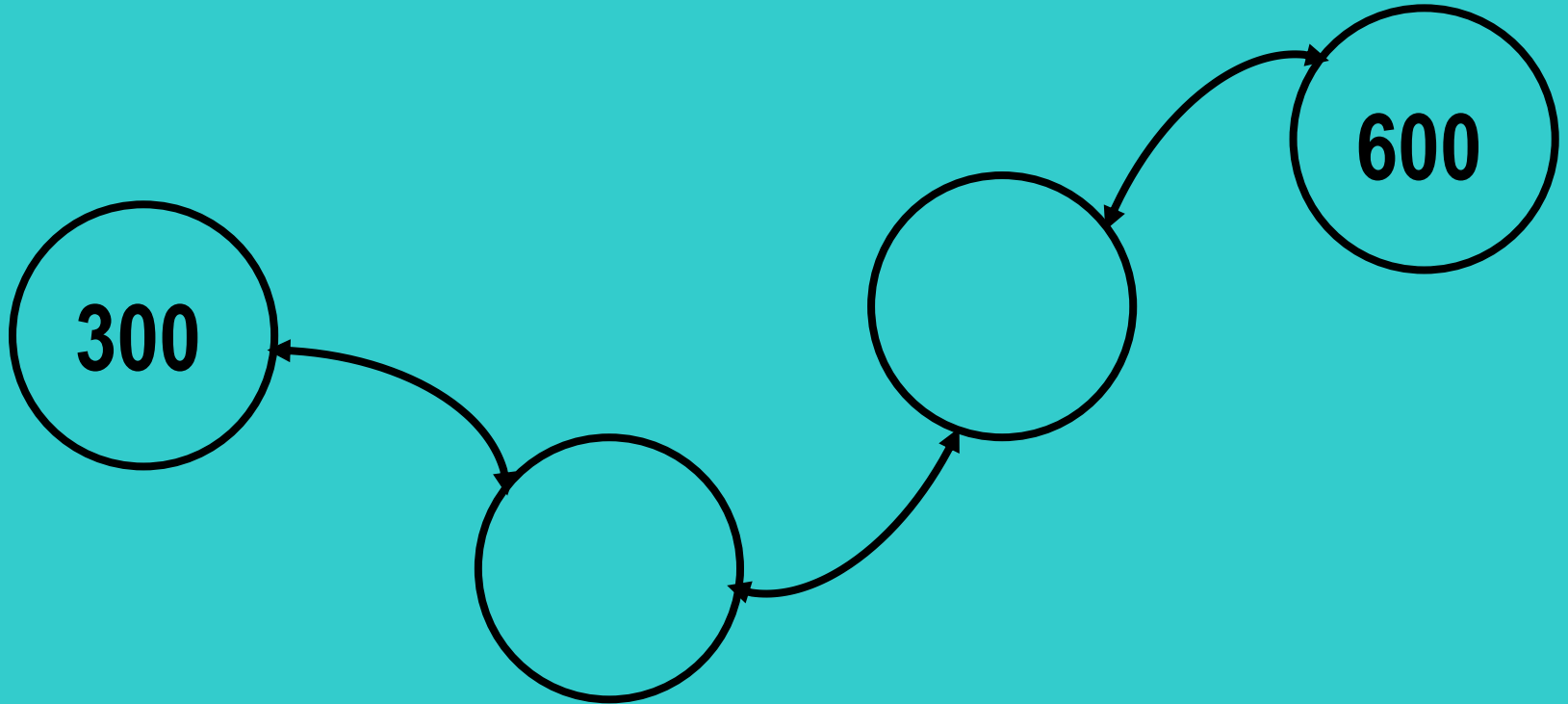
Write the missing number in the box.

$$+ 63 = 81$$

Write the missing number in the box.

$$+ 127 = 255$$

Write two numbers in the empty circles so that the total of all the numbers is 2 400.



Bob has eight cards with numbers written on them. He arranges them in a square with a blank card in the middle

	70	10
40	30	

Each side of the square adds up to 110

Put the missing numbers in the correct boxes

Subtraction

Subtracting numbers mentally.

How would you find the difference between 67 and 42 in your head?

This means subtract or take away 42 from 67.

Sometimes we say 67 minus 42.

67 - 42

Here is one way of doing it. You could partition the numbers.

$$**67 = 60 + 7 \quad 42 = 40 + 2**$$

Subtract the tens

Then subtract the
units

Then add the answers together

$$**60 - 40 = 20**$$

$$**7 - 2 = 5**$$

$$**20 + 5 = 25**$$

$$**So 67 - 42 = 25**$$

$$67 - 42$$

Did you do this?

67 – 40 then take away 2 equals 25

Or

67 – 2 then take away 40 equals 25

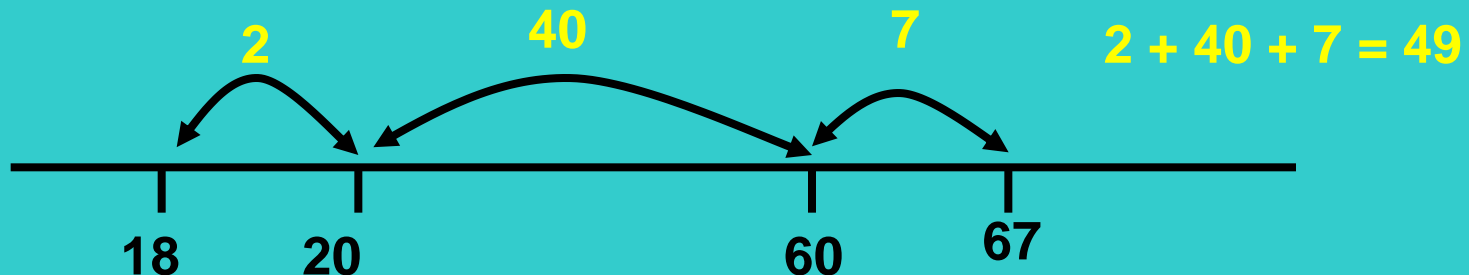
**How would you find the difference
between 67 and 18 in your head?**

Here are some ideas

67 take 10 gives 57 then take 8 to get 49

67 take 20 gives 47 then add 2 back to get 49

You could start with 18 and work out how much you need to get up to 67. Perhaps with a number line you have drawn, or one you have imagined in your head.



It doesn't matter **how you do
it as long as you get the right
answer.**



Some subtraction calculations ...

Write the missing number in the box.

$$\boxed{} - 52 = 38$$

Write the missing number in the box.

$$\boxed{} - 42 = 27$$

Put the digits 9, 2 and 4 in the boxes to complete the calculation.

$$\begin{array}{|c|c|} \hline & \\ \hline \end{array} - \square = 15$$

What might the missing numbers be?

$$50 - \boxed{} - \boxed{} = 15$$

What might the missing numbers be?

$$\square - 15 - \square = 32$$

What might the missing digits be?

$$593 - 2 \square 5 = 32 \square$$

Place Value and Number Properties Revision ...

Put the digits 1, 4 and 6 in the boxes to make a number between 300 and 500.

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Put the digits 2, 4, 7 and 9 in the boxes to make a number between 5 000 and 8 000.

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Year 6 SATs Booster

Maths 2

Part 2 Number Investigations

You are a crack team of Mathematicians. The next slides contain a series of investigations that need open approaches such as trial and error or repeated testing to prove your theories.



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

Find four numbers at the four corners of a square within the grid, for example the square made by the numbers 4, 5, 14, 15. Add the diagonal numbers. What do you notice?

Find another square e.g. 45, 47, 65, 67. Add the diagonal numbers again and see what you find.

Keep finding squares across the grid. Add the diagonal numbers each time. What happens? What if you try larger squares eg. the one with the corners 78, 80, 98 and 100?

My 'magic numbers' are four digit numbers.

When all their digits are added together equal 6, but no digit is 0.

Can you find 10 of my 'magic numbers'?



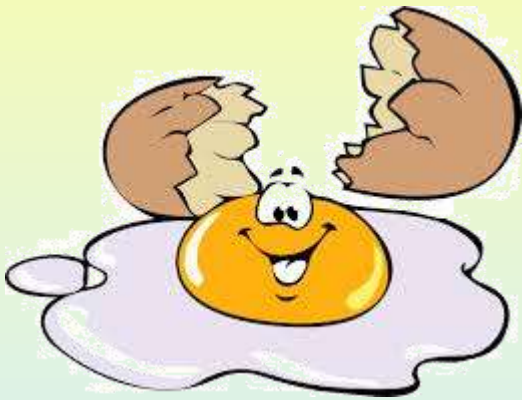
Each letter of the alphabet has been given a value:

A = 1p

B = 2p

C = 3p

and so on until Z = 26p.



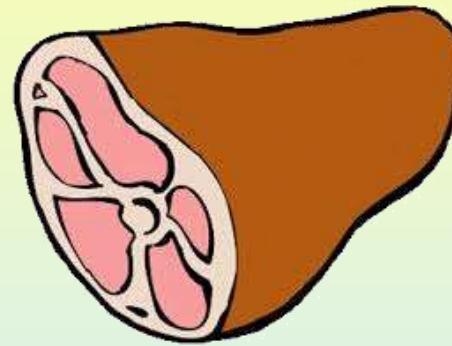
EGG

E = 5p

G = 7p

G = 7p

Total = 19p



HAM

H = 8p

A = 1p

M = 13p

Total = 22p

Can you find a food item that comes to exactly £1?

Can you make up a menu that comes to exactly £2.50?

