



## Slindon C.E. Primary School

### Progression in Mathematical Calculations – Subtraction

#### Guidance for Parents

In **year 1** the expectation is that children will:

Represent and use number bonds and related subtraction facts within 20.

Subtract one-digit and two-digit numbers to 20, including zero.

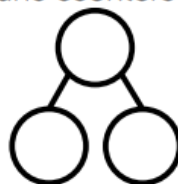
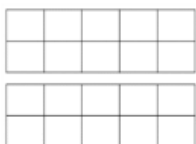
Solve one-step problems that involve subtraction, using concrete objects and pictorial representations, and missing number problems.

#### For example:

First there were 18 sheep. Four of them ran away.

How many sheep are left?

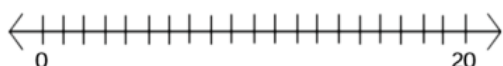
Use ten frames and counters to represent the sheep.



$$\square - \square = \square$$



Tia is working out  $12 - 4$  by counting back on a number line.



Her answer is 9

What has Tia done wrong?

Can you explain her mistake?

What should the answer be?

#### Useful vocabulary:

subtract, take (away), minus  
leave  
how many are left/left over?  
how many have gone?  
one less, two less, ten less...  
how many fewer is... than...?  
how much less is...?  
difference between  
half, halve

Choose the correct digit card to make the number sentences correct.

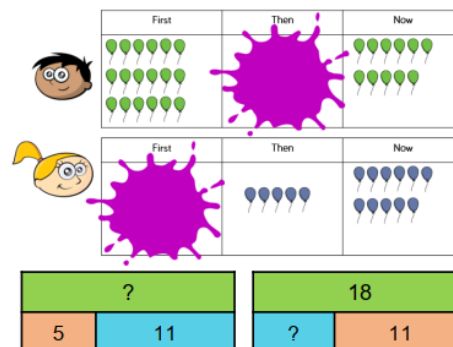
$$13 - 5 < 13 - \underline{\quad}$$

$$16 - 4 = \underline{\quad} + 4$$

$$9 + \underline{\quad} > 9 + 1$$



Kate and Stephen have some balloons. Some of their balloons fly away.



Who had more balloons at the start?  
Who lost more balloons?  
Explain why.



## Slindon C.E. Primary School

### Progression in Mathematical Calculations - Subtraction

#### Guidance for Parents

In **year 2** the expectation is that children will:

Recall and use subtraction facts to 20 fluently, and derive and use related facts up to 100.

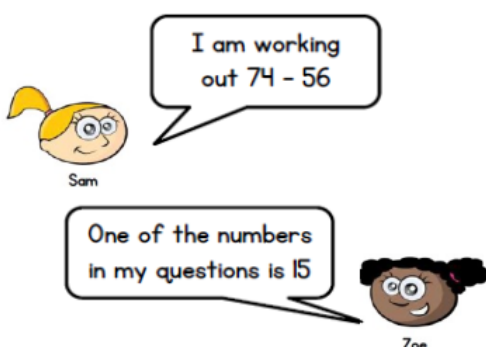
Subtract numbers using concrete objects, pictorial representations and mentally, including two two-digit numbers.

Show that subtraction of one number from another cannot be done in any order.

Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.

#### For example:

Sam and Zoe are working out some subtractions.



Sam's answer is double Zoe's answer.

What could Zoe's subtraction be?

Find the greatest whole number that can complete each number sentence below.

$$45 - 17 > 14 + \square$$

$$26 + 15 < 60 - \square$$

#### Useful vocabulary:

subtract, subtraction, take (away), minus  
leave, how many are left/left over?  
one less, two less... ten less...one hundred less  
how many fewer is... than...?  
how much less is...?  
equals, sign, is the same as  
difference between  
half, halve

**At the end of Key Stage 1 (year 2) the children will be expected to answer questions such as these in their SATs tests:**

Look at the numbers.

15    7    16    8

Use two of these numbers to make this correct.

$$\square - \square = 7$$



There are **1000** pieces in a puzzle.

**12** pieces go missing.

How many pieces are left?



## Slindon C.E. Primary School

### Progression in Mathematical Calculations - Addition

#### Guidance for Parents

In **year 3** the expectation is that children will:

Subtract numbers mentally, including a three-digit number and ones, tens or hundreds.

Subtract numbers with up to three digits, using columnar subtraction.

Solve problems, including missing number problems, estimate the answer to a calculation and use the inverse operation to check answers.

#### For example:

I completed an addition and then used the inverse to check my calculation.

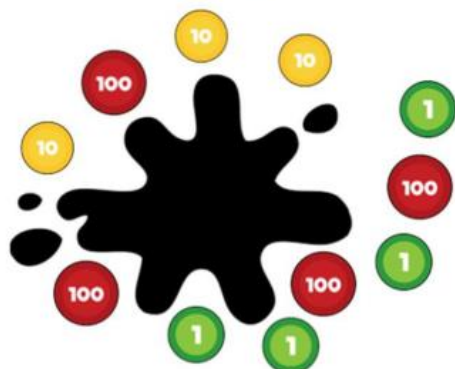
When I checked my calculation, the answer was 250

One of the other numbers was 355

| What could the calculation be?

$$\begin{array}{ccc} \boxed{?} & + & \boxed{?} = \boxed{?} \\ \boxed{\phantom{00}} & - & \boxed{\phantom{00}} = \boxed{250} \end{array}$$

There are 566 in counters altogether but the splat is covering some.



How many different ways can you make the missing amount?

Kassie is working out  $406 - 289$

Here is her working out:

$$\begin{array}{r} \overset{3}{\cancel{4}}0\overset{1}{6} \\ - 289 \\ \hline 7 \end{array} \quad \begin{array}{r} \overset{2}{\cancel{4}}\overset{1}{0}\overset{1}{6} \\ - 289 \\ \hline 027 \end{array}$$

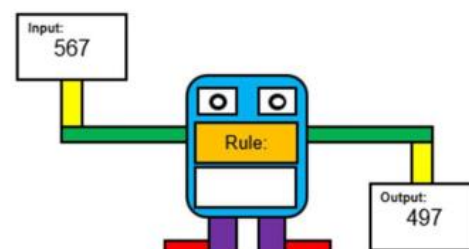
Explain her mistake.

#### Useful vocabulary:

subtract, subtraction, take (away), minus  
leave, how many are left/left over?  
one less, two less... ten less... one hundred less  
how many fewer is... than...?  
how much less is...?  
equals, sign, is the same as  
difference between  
half, halve

Sally thinks the rule for the function machine is subtract 60

Is she correct? Explain.





## Slindon C.E. Primary School

### Progression in Mathematical Calculations - Addition

#### Guidance for Parents

In **year 4** the expectation is that children will:

Subtract numbers with up to 4 digits using columnar subtraction.

Estimate and use the inverse operation to check answers to calculations.

Solve subtraction two-step problems in contexts, deciding which method to use and why.

#### For example:

Look at each pair of calculations below.  
Which one out of each pair of calculations has the same difference as  $2450 - 1830$ ?

$$2,451 - 1,831 = \quad 2,451 - 1,829 =$$

$$2,500 - 1,880 = \quad 2,500 - 1,780 =$$

$$2,449 - 1,829 = \quad 2,449 - 1,831 =$$

#### Useful vocabulary:

subtract, subtraction, take (away),  
minus, decrease  
leave, how many are left/left over?  
difference between  
half, halve  
how many fewer is... than...?  
how much less is...?  
equals, sign, is the same as  
tens boundary, hundreds boundary  
inverse

Find the missing numbers.  
What methods did you use?

|      |  |
|------|--|
| 3465 |  |
| 2980 |  |



$$2,300 + 4,560 = 6,860$$

Use a subtraction to check the answer to the addition. Is there more than one subtraction we can do to check the answer?

Sam, Lucas and Jemima are solving the calculation

$$7000 - 3582$$

Here are their methods.

Sam

$$\begin{array}{r} 7000 \\ - 3582 \\ \hline 3418 \end{array}$$

Lucas

$$\begin{array}{r} 6999 \\ - 3581 \\ \hline 3418 \end{array}$$

Jemima

$$7000 - 3582 = 3418$$

Who is correct? Can you explain how each child has reached their answer? Whose method is the most efficient?

# Slindon C.E. Primary School

## Progression in Mathematical Calculations - Addition

### Guidance for Parents

In **year 5** the expectation is that children will:

Subtract whole numbers with more than 4 digits using columnar subtraction.

Subtract increasingly large numbers mentally.

Use rounding to check answers to calculations and determine levels of accuracy.

Solve subtraction multi-step problems in contexts, deciding which method to use and why.

### For example:



Gina makes a 5-digit number.  
Mike makes a 4-digit number.

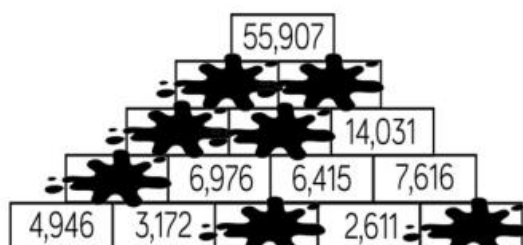
The difference between their numbers is 4,365

What could their numbers be?

#### Useful vocabulary:

subtract, subtraction, take (away),  
minus, decrease  
leave, how many are left/left over?  
difference between  
half, halve  
how many fewer is... than...?  
how much less is...?  
equals, sign, is the same as  
tens boundary, hundreds boundary  
units boundary, tenths boundary  
inverse

Complete the pyramid using addition and subtraction.



Work out:  $4,648 - 2,347$

| Th | H    | T  | O    |
|----|------|----|------|
| •• | •••• | •• | •••• |
|    | •••• | •• | •••• |
|    |      |    |      |
|    |      |    |      |

A milkman has 250 bottles of milk.

He collects another 160 from the dairy and delivers 375 during the day.

How many does he have left?



Sam

This is my method:

$$375 - 250 = 125$$

$$125 + 160 = 285$$

Do you agree with Sam's answer?

$45,536 - 8,426$

| Tth  | Th   | H    | T  | O    |
|------|------|------|----|------|
| •••• | •••• | •••• | •• | •••• |
|      | •••• | •••• | •• | •••• |
|      |      |      |    |      |
|      |      |      |    |      |





## Slindon C.E. Primary School

### Progression in Mathematical Calculations - Addition

#### Guidance for Parents

In **year 6** the expectation is that children will:

Perform mental calculations with large numbers.

Solve subtraction multi-step problems in contexts, deciding which method to use and why.

Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.

#### For example:

Class 6 are solving this calculation:

$$2,000 - 1,287 =$$

Fatima



I used the column method and exchanged in the tens, hundreds and thousands columns

I used my number bonds from 87 to 100 and then 1,300 to 2,000



Adam

Stefan



I subtracted 1 from 2,000 and 1 from 1,287 then I did a column subtraction

#### Useful vocabulary:

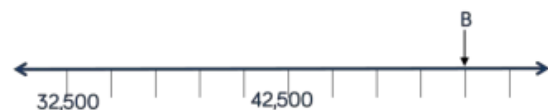
subtract, subtraction, take (away), minus, decrease  
leave, how many are left/left over?  
difference between  
half, halve  
how many fewer is... than...?  
how much less is...?  
equals, sign, is the same as  
tens boundary, hundreds boundary  
units boundary, tenths boundary  
inverse

Calculate:

$$834,501 - 193,642 =$$

$$\begin{array}{r} 4761325 \\ - 938052 \\ \hline \end{array}$$

Find the difference between A and B

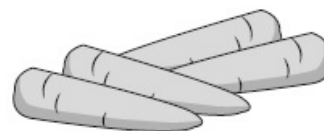


Which method is most efficient?

At the end of Key Stage 2 (year 6) the children will be expected to answer questions such as these in their SATs tests:



potatoes  
£1.50 per kg



carrots  
£1.80 per kg

Jack buys  $1\frac{1}{2}$  kg of potatoes and  $\frac{1}{2}$  kg of carrots.

How much **change** does he get from £5?