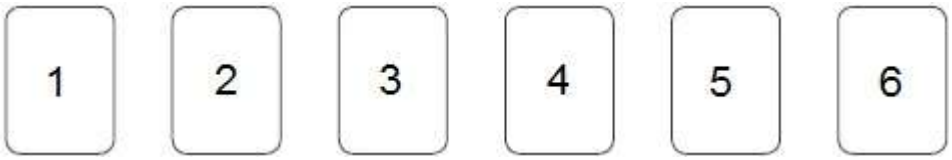
# Junior Maths Evening 2013

For any calculation, children should be first asking themselves if they can do it in their head; if they can, a written method is unnecessary. This is a snap shot of the progress through the written methods – children will learn to calculate with increasingly difficult numbers as their mathematical understanding develops.

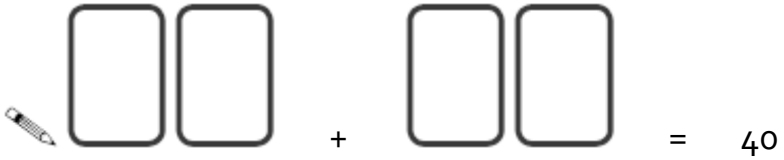
## The Importance of Place Value

**SATs Question**

Here are six digit cards.




Use four of the cards to make this addition correct.




1 mark

## Addition

**> With a number line**

e.g. 65 + 26

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**A.** 34 + 47

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Note: A Number line is always used when calculating with time

**> Using Partitioning**

e.g. 76 + 37 =

70 + 30 = 100

6 + 7 = 13

100 + 13 = 113

**B.** 65 + 59 =

**> Expanded Column Method**

| | 8 | 3 |
|---|---|---|
| + | 4 | 8 |
| | 1 | 1 |
| 1 | 2 | 0 |
| 1 | 3 | 1 |

**C.**

| | 3 | 8 |
|---|---|---|
| + | 9 | 6 |
| | | |
| | | |
| | | |

**> Traditional Column Method**

| | 1 | 4 | 7 |
|---|---|---|---|
| + | 3 | 7 | 5 |
| | 5 | 2 | 2 |
| | 1 | 1 | |

**D.**

| | 2 | 8 | 3 |
|---|---|---|---|
| + | 6 | 5 | 2 |
| | | | |
| | | | |

## Subtraction

**> With a number line counting on**

e.g. 65 - 26

**E.** 94 - 47

**> With a number line counting back**

e.g. 65 - 26

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**F.** 94 - 47

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N.b: Again, a number line would always be used when calculating time difference.

**> Using Partitioning**

e.g. 76 - 33 =

70 - 30 = 40

6 - 3 = 3

40 + 3 = 43

**G.** 94 – 52 =

**> Traditional Column Method**

| | | | |
|---|---|---|---|
| | 4 | 4 | 7 |
| - | 1 | 7 | 5 |
| | 2 | 7 | 2 |
| | | | |

**H.**

| | | | |
|---|---|---|---|
| | 6 | 4 | 1 |
| - | 2 | 5 | 2 |
| | | | |
| | | | |

# Multiplication

**> Array and groups**

e.g. 6 X 4 =

**I.** . 3 X 7

**> Count in multiples using fingers**

e.g. 9 X 4 =

4 8 12 16 20 24 28 32 36

**J** . 8 X 4 =

**> Grid Method**

e.g. 93 X 6 =

| X | 90 | 3 |
|---|---|---|
| 6 | 540 | 18 |

= 558

**K**. 85 X 4 =

| X | | |
|---|---|---|
| | | |

**> Expanded Column Method**

| | 8 | 3 | |
|---|---|---|---|
| X | | 6 | |
| | 1 | 8 | ( 3 X 6) |
| 4 | 8 | 0 | ( 8 0 X 6) |
| 4 | 9 | 8 | |

**L.**

| | 7 | 3 | |
|---|---|---|---|
| X | | 5 | |
| | | | |
| | | | |
| | | | |

**> Traditional Column Method**

T U X U

| | 7 | 5 |
|---|---|---|
| X | | 9 |
| 6 | 7 | 5 |
| 6 | 4 | |

| **M.** | 4 | 5 |
|---|---|---|
| X | | 7 |
| | | |
| | | |

T U X T U

| | | 7 | 5 |
|---|---|---|---|
| | X | 1 | 9 |
| | 6 | 7 | 5 |
| | 7 | 5 | 0 |
| 1 | 4 | 2 | 5 |

| **M.** | | 4 | 5 |
|---|---|---|---|
| | X | 2 | 7 |
| | | | |
| | | | |
| | | | |

## Division

**> Array and groups**

e.g. 2 4 ÷ 4 =

**N.** . 15 ÷ 3 =

**> Count in multiples using fingers**

e.g. 49 ÷ 7 =

7 14 21 28 35 42 49

**O.** 28 ÷ 7 =

**> Chunking**

e.g. 84 ÷ 4 =

| | 8 | 4 | |
|---|---|---|---|
| - | 4 | 0 | ( 10 X 4) |
| | 4 | 4 | |
| - | 4 | 0 | ( 10 X 4) |
| | | 4 | (1 X 4) |
| | | 0 | |

**P.** 97 ÷ 3 =

| | | | |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

**> 'Bus stop' method**

| | 1 | 2 | 1 |
|---|---|---|---|
| 6 | 7 | 2 | 6 |

**Q.**

| | | | |
|---|---|---|---|
| 4 | 9 | 7 | 2 |

**Now choose a method for this SATs question:**

At a tournament there are 7 players in each team.

There are 112 players altogether.

How many teams is this?

## Applying a Combination of Operations

**These questions require children to apply a range of understanding and operations.**

A shop sells jars of honey and honey dippers.

jar of honey honey dipper

Chen bought **three** jars of honey and a dipper.

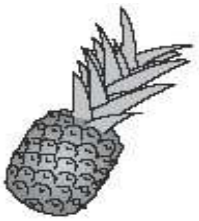
The total cost was £5.40

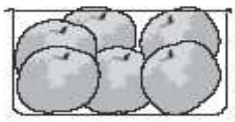
The dipper cost 75p.

How much did each jar of honey cost?

Show your method

Amir and Lara buy some fruit.





| grapes | pineapples | peaches |
|---|---|---|
| £2.50 | 1.40 | £1.99 |
| for 1 kilogram | each | for a box |

Amir buys 2 pineapples and a box of peaches.

How much does he pay?

£

1 mark

Lara buys half a kilogram of grapes and one pineapple.

How much change does she get from £5?

Show your **working**. You may get a mark.

£

2 marks