

Mental Maths Year 4 Week 2

Activity 1

Objective: Use addition facts for all pairs of single-digit numbers to find pairs of multiples of 10

Resources: Whiteboards

Level of difficulty: Easy

- Ask children to each draw a three-by-three grid, and fill it with multiples of 10 from 10 to 180, arranged how they wish.
- Ring two numbers with total of 60.
- Ring two numbers with a total of 80.
- Ring two numbers with total of 160.
- Ask similar questions until one child has three ringed numbers in a line, or every number if you prefer.
- Repeat.

This could be extended to subtraction. E.g. Ring two numbers with a difference of 40.

Activity 2

Objective: To use knowledge of addition and subtraction of single digits to add/subtract multiples of 10

Resources: Bean bag

Level of difficulty: Easy

- Play 'Ping pong'. You say *I know that $5 + 3 = 8$* . You throw the bean bag to a child who says, so *I know that $50 + 30 = 80$* . You will need to practise a little first so that children know what they are expected to say!
- You: *I know that $8 + 8 = 16$* . Child: *So I know that $80 + 80 = 160$* .
- You: *I know that $10 - 4 = 6$* . Child: *So I know that $100 - 40 = 60$* .
- After a while try to build up a brisk pace.

Activity 3

Objectives: Add/subtract single-digit numbers to two-digit numbers

Resources: Operation cards +1 -1 +2 -2 +3 -3 +4 -4 +5 -5 +9 -9

Level of difficulty: Medium

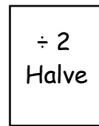
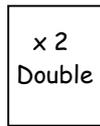
- Demonstrate the use of the operation cards starting off slowly.
- Say that you want everyone to join in the counting/calculating activity by doing what it says on the operation card that you hold up until you indicate that they should stop.
- A counting/calculating sequence could go like this:

Start with +1	1, 2, 3, stop
Continue with +2	5, 7, 9, 11, 13, 15, stop
" +4	19, 23, 27, 31, 35, stop
" +3	38, 41, 44, 47, 50, 53, stop
" -5	48, 43, 38, 33, 28, stop
" +9	37, 46, 55, 64, 73 etc.

- Orchestrate the counting so that the easy parts e.g. adding and subtracting 2 and 5 are faster than the harder parts, e.g. adding and subtracting 9.
- Alternating the easy and harder parts of the sequence means that children who may become lost in one section can continue to join in the next part.

N.B Once children become used to the activity, other operation cards can be included,

e.g.



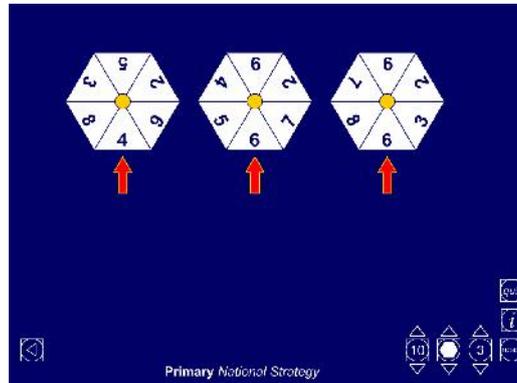
Activity 4

Objective: Adding three small numbers by spotting pairs to 10 or doubles

Resources: Whiteboards, ITP Number spinners (see resources)

Level of difficulty: Easy

- Choose three hexagonal spinners and click on the numbers so that there are no repeats on each spinner. Click on the centres to spin them.
- Children add them up as quickly as they can, writing the answer on their whiteboards. Ask them to show their whiteboards after a given time, e.g. five seconds.
- Remind children to look for the easiest way to add the three numbers, e.g. spotting pairs to 10 or doubles.



Activity 5

Objective: To add/subtract strings of single-digit numbers

Resources: Whiteboards

Level of difficulty: Medium

- Choose four digits and write them on the board with the + and - signs.
- Ask children to choose a two-digit target number.
- Children have a limited time to use the digits and operations to get as close to the target number as possible.
- Devise a scoring system so that if the exact target is reached, it scores highest,

e.g. 9 3 6 4 + -

Target no = 38

6+4+9+9+6+4=38 3 points
 6+6+6+9+6+4=37 2 points
 9+9+9+9= 36 1 point

- Encourage children to use pairs to 10, 20 and doubles, as well as other repeated additions.
- The rules can be changed to allow digits to be combined and/or x and ÷ to be used.

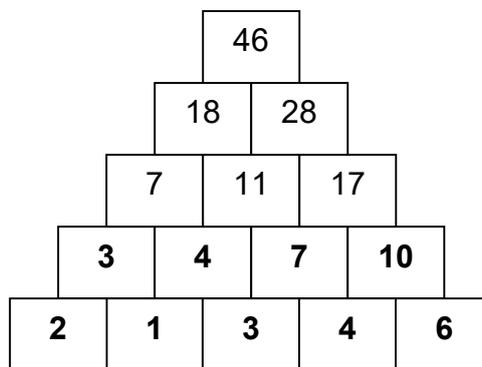
Activity 6

*Objectives: To add and subtract mentally with a range of one-and two-digit numbers
To reason about numbers using addition and subtraction skills*

Resources: Photocopies of pyramids (or children could draw their own), see below, dice (preferably 0-9, but 1-6 will be fine)

Level of difficulty: Medium

- Show children a pyramid on the board. Roll the dice five times to give five numbers to write in the bottom row. Explain how adjacent numbers are added to give the number above.
- Children work in pairs to roll a dice to generate five numbers and fill in their own pyramids.
- Can they complete four pyramids accurately during the starter? Encourage children to work quickly but accurately.



These can also be used in more open ended ways. For instance, children could roll the dice twice to generate a two-digit number to go in the top of square of the pyramid and then try and find numbers to fit the other squares.

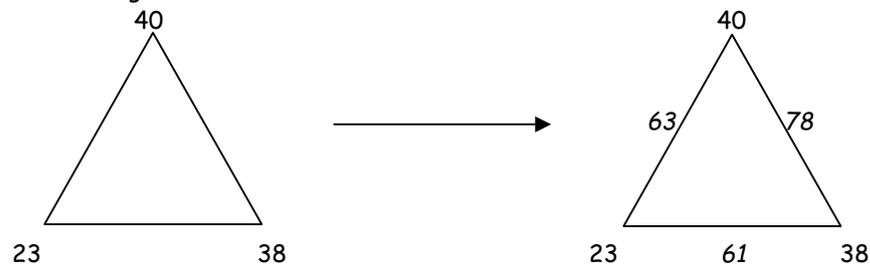
Activity 7

*Objectives: To add/subtract pairs of 2 digit numbers mentally
To reason about numbers using addition and subtraction skills*

Resources: Whiteboards

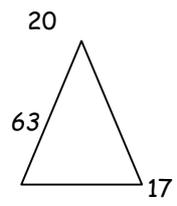
Level of difficulty: Medium/Hard

- Draw a number triangle on the board.



- Ask children to practise adding the corner numbers on a few examples.
- Then set more challenging examples for them to complete,

E.g.



&/or

