Addition with Useful Number Pairs

Overview

This activity uses the knowledge developed in the *Useful Number Pairs* Activity to demonstrate a quick technique that can be helpful when adding a collection of numbers.

The activity should be done after *Useful Number Pairs.*

Skills and Knowledge

Addition using pairs to 10

Addition using pairs to 100

Preparation and Materials

Photocopy Activity Sheet 1

Suggested Procedure

Start by revisiting the useful number pairs that add to 10.

Ask: *Write down three number pairs that add to 10.*

Collect students' answers till you have the whole list on the board.

Explain:
- *These pairs can help you if you have a whole lot of numbers to add up*

Distribute Activity Sheet 1.

Ask:
- *Look at the first column of numbers*
- *Can you see any pairs that add to 10?*
                    [Students should see 8+2, 4+6 and 3+7]
- *Draw lines between each of those pairs*
- *Now tell me what numbers are left*

The total is 10 + 10 + 10 + 4 + 5, which is 39.

Ask students to use the method of spotting the pairs to add the other collections of numbers on *Activity Sheet 1, examples 1 – 4.*

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IN THE HEAD CALCULATIONS: Addition with Useful Number Pairs

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For each example ask:
- *How many pairs did you find?*
- *What numbers are left?*
- *What's the total?*

Using the pairs to 10 in columns

Explain that if you have a long addition with double digit figures, eg 59 + 63 + 21 etc. The pairs to 10 technique can be used, first in the units column and then again in the tens column.

For example:

```
 57 ⌐
 23 ⌐
 79
 84 ⌐
  6 ⌐
 50
─────
29²9
```

Put the list of numbers on the board.

Ask:
- *Spot the pairs to 10 in the units column*
                [2 pairs of 10 + 9 = 29]
- *What will I write down?*
                [9 in units and 2 more in tens column]
- *Spot the pairs to 10 in the tens column*
                [2 pairs of 10 + 7 + 2 extras = 29 tens]
- *So the answer is?*
                [299]

See *Activity Sheet 1, examples 5, 6 & 7* for further practice using tens pairs in both columns.

Using pairs to 100

Put a quick example such as 99 + 40 + 60 on the board.

Ask: *Can anyone tell me quickly the answer to this?*

You are hoping someone will point out that 40 + 60 is a number pair that adds to 100.

So quickly they can see that only 99 is left to add and the quick answer is 199.

$$99 + 40 + 60$$
$$99 + 100 = 199$$

Ask:

- *Do you remember the pairs to 100?*
- *Can you give me some examples?*
- *What about the pairs that end in 5, e.g. 35?*

As students recall these, list them on the board for reference and to jog their memories.

Now ask students to try a few more examples quickly in their heads as you write them on the board. For example:

> *30 + 82 + 70 =*
> *75 + 65 + 25 =*
> *39 + 35 + 65 =*
> *45 + 170 + 55 + 30 + 25 =*

Note: In the last example the pair is actually 170 + 30 which adds up to 200. Students might need some extra practice on examples of this type.

When students seem confident ask them to try questions 9 – 18 on *Activity Sheet 1.* You may want to go over these one by one to ensure that students were able to spot the pair matching opportunities in each.

Pairs to 100 for adding money

The final examples on *Activity Sheet 1* are columns of prices similar to those that may be on supermarket dockets. Encourage students to use the pairs to 100 to add the cents and the pairs to 10 in the dollars.

Adding with useful number pairs

Add these columns of figures by first grouping the pairs of numbers that add to 10.

1.	2.	3.	4.
8	5	6	9
4	3	2	9
3	4	5	3
4	7	8	7
6	6	5	1
5	2	4	4
2	8	7	4
+ 7	+1	+9	+6

5.	6.	7.	8.
21	51	95	60
43	33	90	2
17	87	35	55
96	26	75	8
70	30	10	45
69	59	15	40
14	+74	+80	+70
+85			

9.   99 + 45 + 55

10.   75 + 59 + 25

11.   90 + 265 + 10

12.   35 + 65 + 310

13.   40 + 160 + 98

14.   25 + 85 + 15 + 75

15.   50 + 15 + 35 + 65 + 50 + 85

16.   70 + 140 + 230 + 60

17.   199 + 198 + 197 + 196 + 4 + 3 + 2 + 1

18.   75 + 65 + 55 + 45 + 135 + 225

19.	20.
85 c	$5.25
40 c	$3.50
35 c	$4.75
45 c	$7.05
65 c	$6.20
15 c	+$2.95
60 c	
+70 c	