

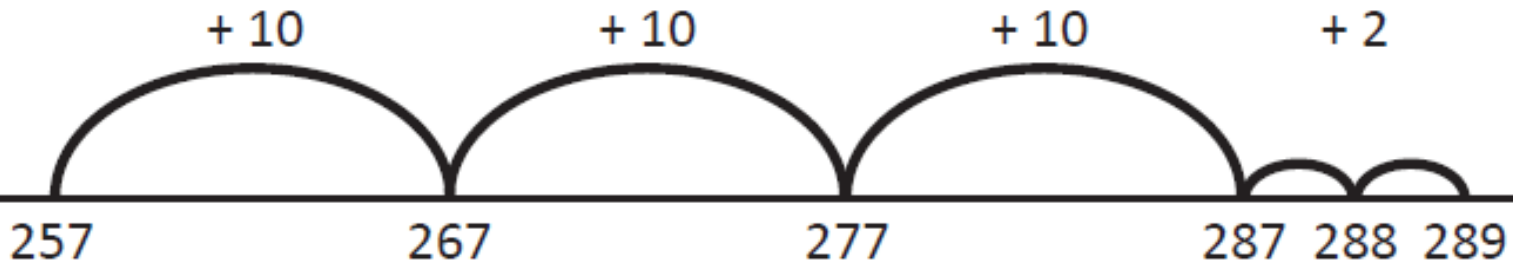
Year 5 Mathematics

1. Mental Strategies

We demonstrate and teach these methods as written methods initially, in the hope that, as children become more confident, they can use them mentally.

○ Addition by counting on:

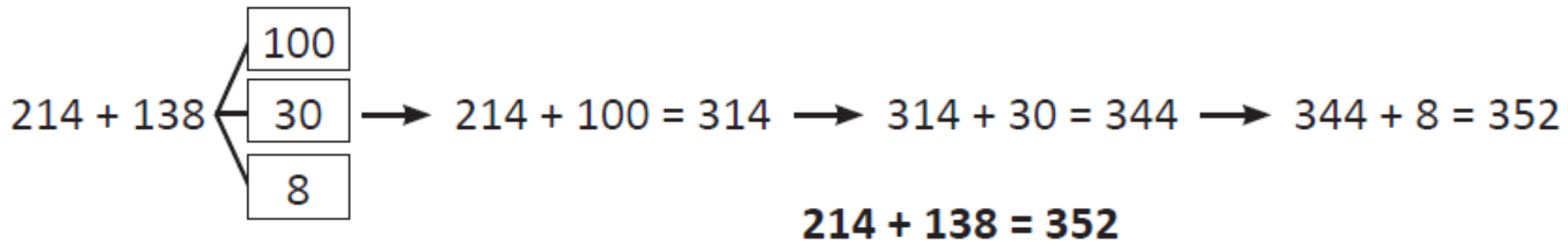
What is $257 + 32$?



257, 267, 277, 287, 289

○ Addition by partitioning:

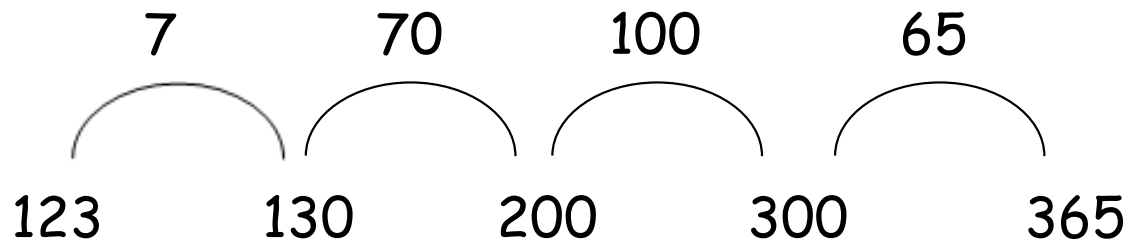
What is $214 + 138$?



214, 314, 344, 352

○ Subtraction by counting on:

$$365 - 123 = 242$$



123.....Next ten

Next hundred

Next hundred

Until we get to365

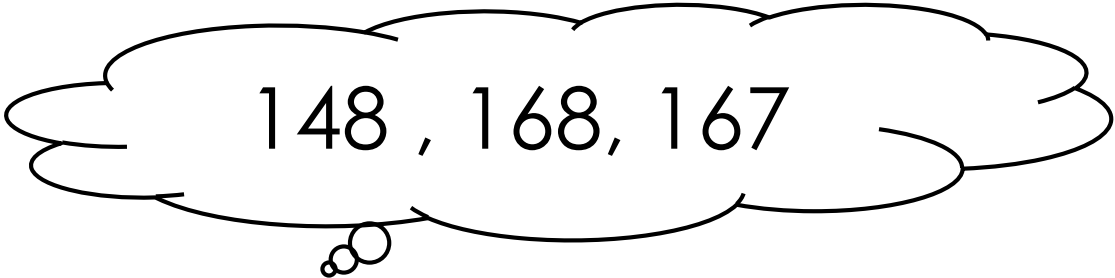
$$77 + 165 = 242$$

- Near multiples of 10:

What is $148 + 19$?

$$148 + 20 = 168$$

$$\begin{aligned} \text{So, } 148 + 19 &= 168 - 1 \\ &= 167 \end{aligned}$$



148 , 168, 167

- Near multiples of 10:

What is $349 - 21$?

$$349 - 20 = 329$$

$$\begin{aligned} \text{So, } 349 - 21 &= 329 - 1 \\ &= 328 \end{aligned}$$



349 , 329 , 328

○ Related Facts:

What is $80 + 60 + 50 + 40$?

•

$$6 + 4 = 10 \text{ and } 8 + 5 = 13$$

$$10 + 13 = 23$$

$$\text{So, } 80 + 60 + 50 + 40 = 230$$

○ Related Facts:

What is 800×70 ?

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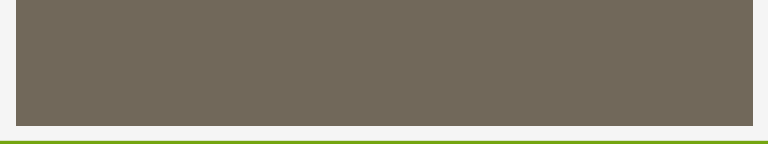
$$8 \times 7 = 56$$

$$\text{So, } 800 \times 70 = 56000$$

How should I do it?

By calculating mentally or writing it down?

- This will depend on the size of the numbers involved and the individual child.
- When faced with a calculation, no matter how large or difficult the numbers may appear to be, all children should ask themselves the following:



Can I do this
in my head?

I can't do all of it in my head, what
do I need to write down in order to
help me calculate the answer?

Do I know the
approximate size of the
answer?

Will the written
method
I know be helpful?

2. Short Division

(dividing by a
single-digit number)

What is $64 \div 4$?

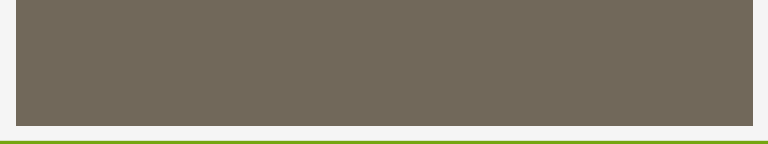
How many fours are in sixty-four?

$$\begin{array}{r} 4 \overline{) 64} \\ \underline{16} \\ 16 \\ \underline{16} \\ 0 \end{array}$$

How many 4s are in $6 \dots 1 \text{ r } 2$
(How many groups of 4?)

$$\begin{array}{r} 64 \overline{) 4} \\ \underline{4} \\ 0 \end{array}$$

How many 4s are in $24 \dots 6$
(How many groups of 4?)



Knowing multiples of all numbers from 2 to 9 and being able to recite them quickly is key to success in doing short division (and in other key areas such as fractions.)

3. Differentiation

- Working at the level
- Mastering basic concepts
- Target your Maths
- Challenging and extending: Puzzles, The Challenge Book
- Support
- Mathletics



Thank you for attending, we hope
you've found it useful.

Year 5 Teachers , November 2017.