Monday 1st June 2020

Place Value

Hi Yachts!

Mental Maths

Choose the best option for you then solve the problem in your head:

Option 1: Double each of these numbers: 10, 11, 12, 13, 14, 15, 16, 17, 18, 19

Option 2: Count down in 5s from 48

Option 3: Divide 48 by 10 and by 100, then multiply it by 10 and 100

Use the RUCSAC method to solve the problems:

Read — Read the question carefully.

Underline — Underline or write down the keywords and numbers.

Choose — Choose the correct operation (+ - x or ÷) and a mental or written method of calculation (you could use diagrams).

Solve — Solve it! Make sure you follow the steps carefully.

Answer — Check that you have answered the question properly. What did you need to find out in the first place?

Check — Check your answer. Use the inverse calculation or another checking technique (was it close to your estimate?)

1. Look at the table below:

10	20 ▲		40	50	60		80	90
	2 ●	3	4			7	8	9

   a. Can you see a pattern?

   b. Fill in the missing numbers.

   c. Say the numbers in the green boxes aloud.

   d. How can you get from the circle number to the triangle number? Can you use addition? What about multiplication?

2. Look at the table below:

100		300	400	500		700		900
10	20 ★		40	50	60			
	2 ♥	3	4			7		9

a. Can you see a pattern?

b. Fill in the missing numbers.

c. Say the numbers in the green boxes aloud.

d. How much bigger is the star number compared to the heart number?

3. Combine the numbers in the green boxes then say them aloud.

a.

300	400	500	600
30	40	50	60
3	4	5	6

b.

200	300	400	500
20	30	40	50
2	3	4	5

c.

600	700	800	900
60	70	80	90
6	7	8	9

4. How many different ways can you partition 888? *Example:* 888 → 700 180 8

a. Is there anything that is the same about all the ways you have partitioned the number?

b. What is different?

Challenges

5. Look at the different ways I have partitioned 783.

☐ hundreds, 8 tens, 3 ones

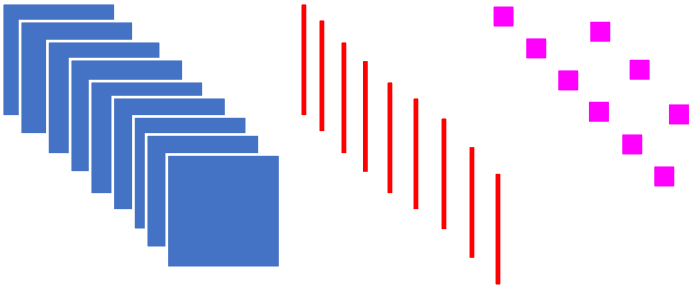
☐ hundreds, 18 tens, 3 ones

☐ hundreds, 28 tens, 3 ones

a. What are the missing numbers?

b. Can you explain the pattern?

6. I have 9 hundreds, 9 tens and 15 ones in Dienes. Using the exchange method (e.g. exchange 10 ones for 1 ten), what is the smallest amount of Dienes pieces that I end up with?



7. I want to exchange some Dienes pieces so that I only have four left at the end. How many hundreds, tens and ones could I start with? Find at least three options.