# Wednesday 1st July 2020

# Partitioning and Rounding

#### Hi Yachts!

### Mental Maths

Choose the best option for you then solve it in your head.

Option 1: Start at 100 and count down in 10s until you reach 0. Do you notice a pattern?

Option 2: Start at 0 and count up in 6s until you reach 60. Do you notice a pattern?

**Option 3:** Choose any three-digit number. Add 300 to it. Subtract 300 from it. Repeat with two more three-digit numbers.

Choose the best set of questions below for you to answer, or you could try all of them! Use the RUCSAC method to solve the problems:

R	Read	Read the question carefully.
	Underline	Underline or write down the keywords and numbers.
C	Choose	Choose the correct operation $(+ - x \text{ or } \div)$ 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?
C	Check	Check your answer. Use the inverse calculation or another checking technique (was it close to your estimate?)

Remember that 10 ones is the same as 1 ten:



- 1. All of these statements are true. Can you explain the pattern using the words 'tens' and 'ones'?
  - 57 is made of 5 tens and 7 ones.
  - 57 is made of 4 tens and 17 ones.
  - 57 is made of 3 tens and 27 ones.
  - 57 is made of 2 tens and 37 ones.
  - 57 is made of 1 ten and 47 ones.

	57 is made of 0 tens and 57 ones.	
2.	Can you use question 1 to help you to find some different ways of partitioning (splitting) 48?	
	48 is made of 4 tens and 8 ones.	
	48 is made of tens and ones.	
	48 is made of tens and ones.	
	48 is made of tens and ones.	
	48 is made of tens and ones.	
3.	Complete the part-whole models to show some of the different ways that the number can be (split). Remember that the two parts must add together to make the whole.	partitioned
		(21)
4.	What do you notice about the second and third part-whole models?	
<u>د</u>	What do you notice about the fourth and fifth next whole models?	
Э.	What do you notice about the fourth and fifth part-whole models?	
,	Considerable matrix 10 40 40 100	
0.	Complete this pattern: 10 40 60 100	
7.	We are going to look at <b>rounding</b> ; finding the nearest multiple of 10 to a number.	
	a. Is 9 nearer to 0 or 10?	
		10
0	1 2 3 4 5 6 7 8 <u>9</u>	<u>1</u> 10
	b. Is 41 nearer to 40 or 50?	
40	<u>41</u> 42 43 44 45 46 47 48 49	a 50
	c. Is 26 nearer to 20 or 30?	
20	21 22 23 24 25 <u><b>26</b></u> 27 28 29	30
	d. Is 15 nearer to 10 or 20?	
10	11 12 13 14 <u><b>15</b></u> 16 17 18 19	a 20
	e. Is 73 nearer to 70 or 80?	
70	71 72 <u><b>73</b></u> 74 75 76 77 78 7	9 80
	f. Is 44 nearer to 40 or 50?	
40	41 42 43 <b>44</b> 45 46 47 48 4	R 50

- 8. Look at the ones digit in each of the questions above.
  - a. If you round down to the previous multiple of 10 on the number line, what might the ones digit be?
  - b. If you round up to the next multiple of 10 on the number line, what might the ones digit be?
  - c. Which question was the most difficult?

You should have figured out this rule for **rounding** to the nearest ten:

If the ones digit is 0, 1, 2, 3 or 4, we round the number down to the previous ten.

If the ones digit is 5, 6, 7, 8 or 9, we round the number up to the next ten.

## Challenges

When **rounding** a number, we must first know which place value we are rounding it to. This week we are looking at rounding to the nearest ten, hundred or thousand.

Then we must look at the digit **to the right** of the place value we are rounding to; this will show us whether to round up or down. For example, if you want to round to the nearest ten you'd look at the ones place.

If the digit you are focusing on is 0, 1, 2, 3 or 4, we round the number down. If the digit you are focusing on is 5, 6, 7, 8 or 9, we round the number up.

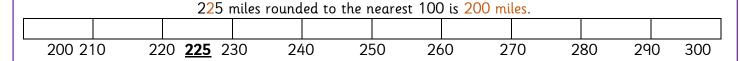
Here is an example:

A family travels 225 miles in a car.

How far do they travel to the nearest ten and nearest hundred miles?

 225 miles rounded to the nearest 10 is 230 miles.

 220 221 222 223 224 225 226 227 228 229 230



- 9. Round the following numbers to the nearest ten and hundred:
  - a. 456
- b. 9022
- c. 52
- d. 824
- e. 155
- 10. Write all the numbers that round to the following numbers when rounded to the nearest ten. Draw a number line going up in 10s with your number in the centre to help you. I have given you an example:

### 120



- a. 40
- b. 300
- c. 450