Friday 3rd July 2020

Partitioning and Rounding

Hi Yachts!

Mental Maths

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

Option 1: What is one half of 16? What is one quarter of 16?

Option 2: What is one quarter of 32? What is three quarters of 32?

Option 3: What is one quarter of 62? What is three quarters of 62?

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:

Read — Read the question carefully.

Underline — Underline or write down the keywords and numbers.

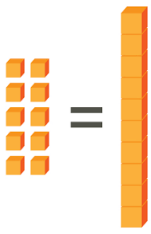
Choose — Choose the correct operation (+ - x or ÷) and a mental or written method of calculation (you could use diagrams).

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?

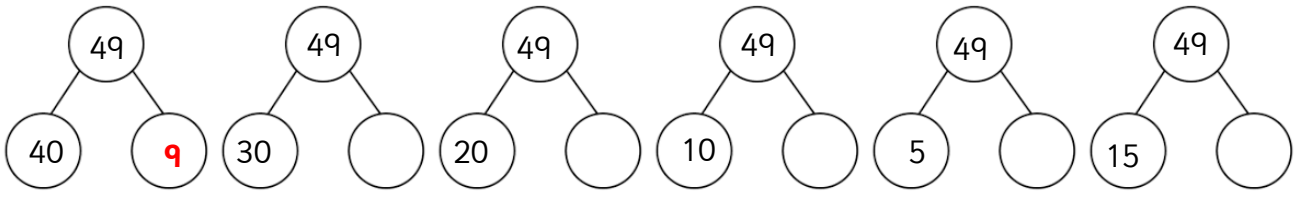
Check — Check your answer. Use the inverse calculation or another checking technique (was it close to your estimate?)

Remember that 10 tens are the same as 1 ten:



1. Complete the part-whole models and bar charts to show some of the different ways that the number can be partitioned (split).

   Subtract the part from the whole to find the other part. I have given you an example:



49 – 40 = 9

2. What do you notice about the fourth and fifth part-whole models?

If you need some help with the following questions, draw a number line going up in 10s if you're rounding to the nearest ten, 100s if rounding to the nearest hundred or 1000s if rounding to the nearest thousand. Place the number you are rounding in the centre of the number line.

3. There were 416 passengers on a flight from London to New York. Round this to the nearest 10 (don't forget about the hundreds digit in your answer).

4. Lucas measured the length of his bedroom and found that it was 372cm. Round this to the nearest 10 (don't forget about the hundreds digit or about the cm in your answer).

5. There were 735 children in the school hall. Round this to the nearest 10 (don't forget about the hundreds digit in your answer).

6. When Brodie was born he weighed 8lb and measured 57cm in length. Round his weight and length to the nearest 10 (don't forget to use lb and cm in your answer).

7. Callum has 244 stamps in his collection. Round this to the nearest 10 (don't forget about the thousands digit in your answer).

8. A number rounds to the ten that it is closest to on the number line.
   a. Is this always, sometimes or never true?
   b. Explain your answer.

Challenges

9. Jack has rounded a number to the nearest ten and the nearest hundred. The number rounded to the same number each time.
   a. Is this possible?
   b. Prove it.

10. When a number is rounded to the nearest thousand it is 3000.

    When the same number is rounded to the nearest hundred it is 3200.

    When the same number is rounded to the nearest 10 it is 3250.

    What could the number be?

11. Two different 2-digit numbers round to 40 when rounded to the nearest ten. The sum of the two numbers is 79.
    a. What could the two numbers be?
    b. What are all the possibilities?