Thursday 2nd July 2020

Partitioning and Rounding

Hi Yachts!

Mental Maths

What can you tell me about the number **963**?

Think about things like which of the digits are odd or even, how many ones are there, what can you divide the number by, what is the sum of the digits…

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.

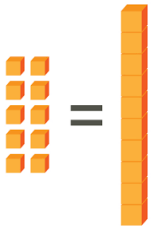
Choose Choose the correct operation (+ - x or ÷) and a mental or written method of calculation (you could use diagrams).

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?)

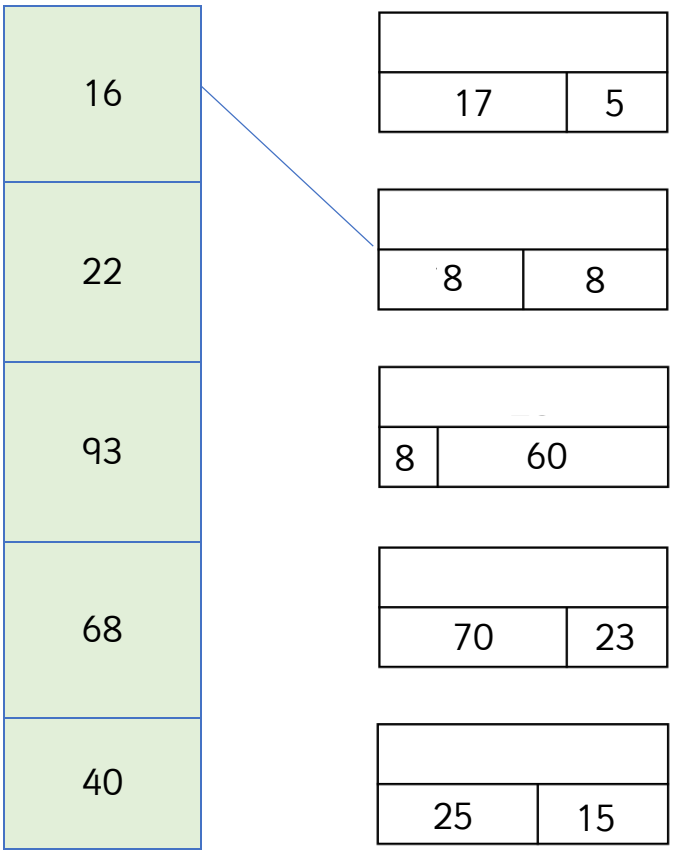
Remember that 10 tens are the same as 1 ten:



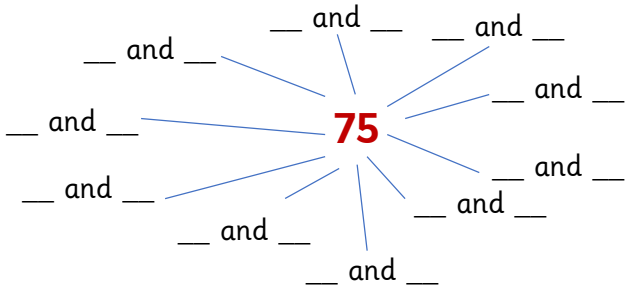
1. Match the number to the tens and ones. I have given you an example.

85	0 tens and 27 ones
63	5 tens and 1 one
51	5 tens and 13 ones
27	6 tens and 25 ones
30	2 tens and 10 ones

2. Match the number to the bar model. Remember that the two parts add together to make a whole.



3. Find at least 10 different ways to partition 75. Remember that the two parts must add up to 75.



Yesterday we learnt that, when we round numbers **to the nearest 10**, we must look at the ones digit.

If the ones digit is 0, 1, 2, 3 or 4, we round the number down to the previous 10.

If the ones digit is 5, 6, 7, 8 or 9, we round the number up to the next 10.

4. Circle the correct answer:

a.	48 rounds to 40	48 rounds to 50
b.	23 rounds to 20	23 rounds to 30
c.	55 rounds to 50	55 rounds to 60
d.	84 rounds to 80	84 rounds to 90
e.	66 rounds to 60	66 rounds to 70

5. We continue to look at the ones digit when rounding to the nearest 10, even if we have a three-digit number.

a. Is 309 nearer to 300 or 310? _____

300	301	302	303	304	305	306	307	308	**309**	310

b. Is 641 nearer to 640 or 650? _____

640	**641**	642	643	644	645	646	647	648	649	650

c. Is 125 nearer to 120 or 130? _____

120	121	122	123	124	**125**	126	127	128	129	130

6. Colour in the correct answer:

a. Round 537 to the nearest 10

b. Round 704 to the nearest 10

c. Round 670 to the nearest 10

d. Which space rock will round to 220 when rounded to the nearest 10?

e. Which space rock will round to 600 when rounded to the nearest 10?

f. Which space rock will round to 870 when rounded to the nearest 10?

Challenge

We're going to follow the same rules as yesterday to round to the nearest 1000. Remember that we must look at the digit **to the right** of the place value we are rounding to (the hundreds in this case).

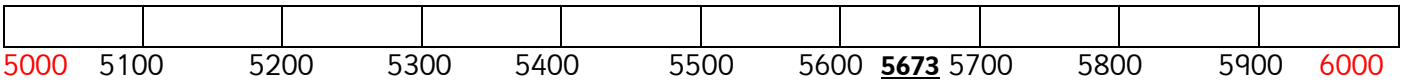
If the digit you are focusing on is 0, 1, 2, 3 or 4, we round the number down. If the digit you are focusing on is 5, 6, 7, 8 or 9, we round the number up.

Here is an example:

A football stadium holds 5673 people.

How many people does it hold to the nearest thousand?

5673 miles rounded to the nearest 1000 is 6000.



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.

7. Round the following numbers to the nearest thousand:
   a. 456 b. 9022 c. 52 d. 824 e. 155

8. A supermarket sells 887 cartons of yoghurt a week.
   a. How many cartons is this to the nearest hundred?
   b. How many cartons is this to the nearest thousand?

9. 3545 people buy a Millwall season ticket each year.
   a. Round this to the nearest hundred (don't forget about the thousands digit in your answer).
   b. Round this to the nearest thousand.

10. A newspaper reports that about 2000 people attended a parade. If the newspaper has already rounded this to the nearest thousand, what could the exact attendance be?

11. There are 8796 adult tickets and 5631 child tickets sold for a concert.
   a. To the nearest ten, how many tickets are sold altogether (don't forget about the thousands and hundreds digit in your answer)?
   b. To the nearest hundred, how many tickets are sold altogether (don't forget about the thousands digit in your answer)?

12. A number rounded to the nearest hundred is 500.
   a. What is the smallest possible number it could be?
   b. What is the greatest possible number it could be?