This week is a shorter week as we have a bank holiday on Friday – so you would only have 2 lessons. This week's content is therefore a little less! If you do have more time make sure that you have completed all of the tasks set on both mymaths and mathswatch during the previous 2 weeks – some of you have not done them all or have not got 70% in the ones you have done.

Rounding

Our focus is on Rounding this week – you have met this before but this is an area that can easily lose you the final mark of several questions on the GCSE paper and is therefore essential you get it right every time!

Rounding to decimals – this focuses on the digits AFTER the decimal point. If you are asked to round to 1 decimal place (d.p.) you MUST have exactly one digit after the decimal point even if it is 0

e.g. $7.96 \approx 8.0$ (1 d.p.)   Note: It is incorrect to just write 8

This extends to 2 decimal places etc

e.g. $125.495 \approx 125.50$ (2 d.p.)

Remember that you normally only change 1 digit but when a 9 goes up to a 10 it changes 2 of the digits, as in both cases above.

Rounding to Significant Figures – this uses all of the digits in the number. The FIRST NON-ZERO digit is the first significant figure. The subsequent digits represent the second, third and fourth… significant figures and can be zero.

To ESTIMATE any calculation, you should round all numbers to 1 Significant Figure.

Read through the above again and make notes or if you can print this off and stick it into your book. Then work through the tasks below:

Task 1: Work through the following clips on mathswatch, completing all of the practice questions within the clip.

Clip 31	Nearest 10, 100, 1000
Clip 32	Decimal places
Clip 90	Significant figures

Task 2 : By rounding all of the numbers to 1 Significant figure, re-write the calculations below to Estimate the answer:

Question 1 is done for you. (Remember BODMAS)

If you are writing this straight into your books you may prefer not to use a table but set it out as the question below:

1. $213 + 456 \approx 200 + 500 = 700$

Note the use of the first 'approximately equal' sign and then how this is changed to an equal sign, because 200 + 500 does equal 700.

Question	Calculation	Rounded Calculation	Estimated Answer
1	213 + 456	200+ 500	700
2	748 - 97		
3	34 x 49		
4	214 ÷ 52		
5	4.3^2		
6	$\dfrac{109 + 376}{48}$		
7	(77 − 18) x 3.2		
8	$6.7^2 + 231$		
9	$2.6 \times 4.1 - 3.2^2$		
10	$\dfrac{228 + 417}{380 - 123}$		
11	$(5.6^2 − 2.7^2) \times 3.12$		
12	$(5.6 − 2.7)^2 \times 312$		
13	$\dfrac{708 − 43.8}{4.3^2 + 3.9}$		
14	$(2.1^3 + 6.8^2) \times 2.1$		
15	$5.7^2 + (3.6 − 7.1)^2$		

Task 3:

Complete the Assignment 'Rounding' on mathswatch.

Finally, Task 4: Some of you may find this more challenging.

One good method is to add extra zeros to the original numbers so they all have the same number of digits after the decimal point

e.g. for Q 1   0.42**0**   0.4**00**   0.415   0.48**0**   0.469
sort the decimals by comparing the numbers after the decimal point *(as the ones before it are all the same – in this case all 0)*; but remove the extra zero's when you give your answer.

1. Write the following numbers in order of size.
Start with the smallest number.

0.42   0.4   0.415   0.48   0.469

2. Write the following numbers in order of size.
Start with the smallest number.

0.08   0.25   0.81   0.2   0.68

3.   Write these numbers in order of size.
Start with the smallest number.

0.507   0.75   0.5   0.078

4. Write these numbers in order of size.
Start with the smallest number.

0.92   0.901   0.99   0.099   0.909

5. Five boys take part in a long jump competition.
The distances jumped were:

4.31m   4.08m   4.1m   4.093m   4.51m

(a) Write down the distance of the longest jump

(b) Put the jumps in order, starting with the shortest.