GCSE Maths

ASSIGNMENT WK7

Preparatory Sheet

Required preparation for the session on.....

'NUMBERLINES, PLACE VALUE, COMPARING NUMBERS'

Aims of this session: Review your abilities in each of these areas, Green (feel confident...G), Amber (need to work more on...A), Red (Feel weaker at this...R)

G   A   R

1. Drawing a positive/negative number line
2. Placing numbers onto number lines
3. Identify the position of numbers on number lines, including fractions and decimals
4. Finding the difference (distance) between two numbers including negative numbers
5. Round numbers and find their 'Upper' and 'Lower bounds'
6. Find how many of one number fits into another (division on a number line)
7. Find one number as a fraction of the other
8. Write an inequality for a range of numbers, including negative numbers
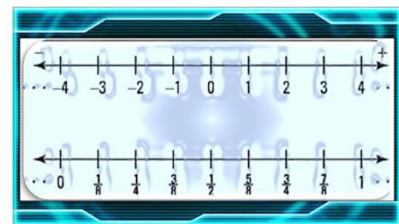
MOSTLY GREEN   MOSTLY AMBER   MOSTLY RED

N01 - Number Lines

START

Log into 'Moodle'. Watch the video/s, read and practice

using the online materials. Read your GCSE maths AQA book

Write a comment about what you learned from the videos / materials below
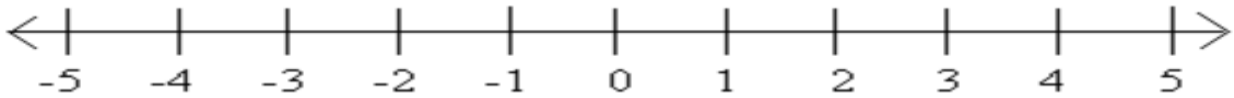
1.

Drawing a positive/negative number line

Q....What is a number line? Can you draw a number line below including positive and negative values from -20 to 20?

HINT...think about a ruler or thermometer! Don't forget about zero.

2 and 3   Placing numbers onto number lines.

Q….On the number line below, practice placing these numbers in order by writing them where they should be.

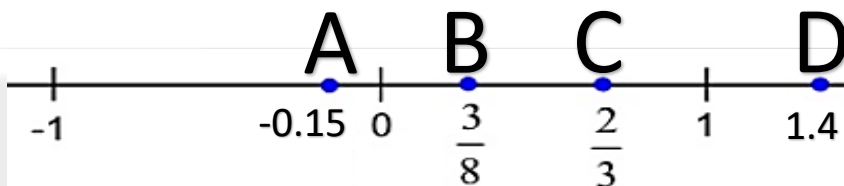| 3.2 | 0.25 | -3.5 | 4 | -3/4 | -4.999 | 2 1/3 |

HINT…try turning all values into decimals first. Think about the values between each division.

4.

Finding the distance between 2 numbers, including negative numbers.

Q… On the number line below, find the difference (also known as 'distance' or 'range') between A and B, B and C , C and D.

HINT…this is a subtraction sum but you need both values to be in the same number system first!

N19 Rounding, dps, sf and bounds

5. *Prepare by using N19 'Rounding, dps, sf and bounds'*
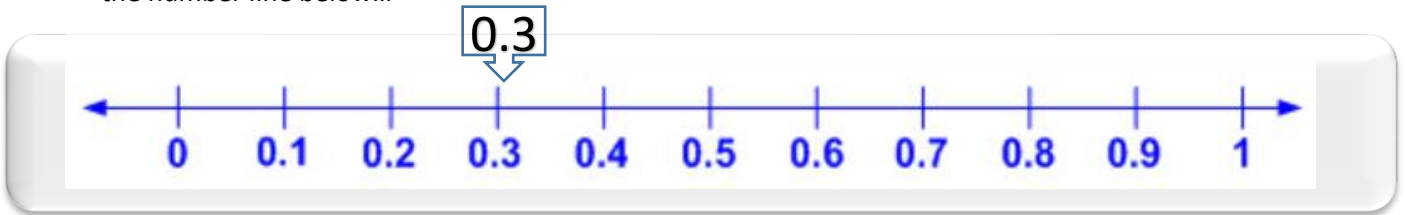
Round Numbers and find their Upper and Lower Bounds (1dp, one decimal place).

Q…The Upper bound of 0.3 is the minimum value a number can be if it was rounded up to 0.4

  The Lower bound of 0.3 is the minimum value a number can be if it was rounded up to 0.3

  Find the 'upper and lower bounds to 1dps' of the value 0.3. Can you show these values with a line on top of
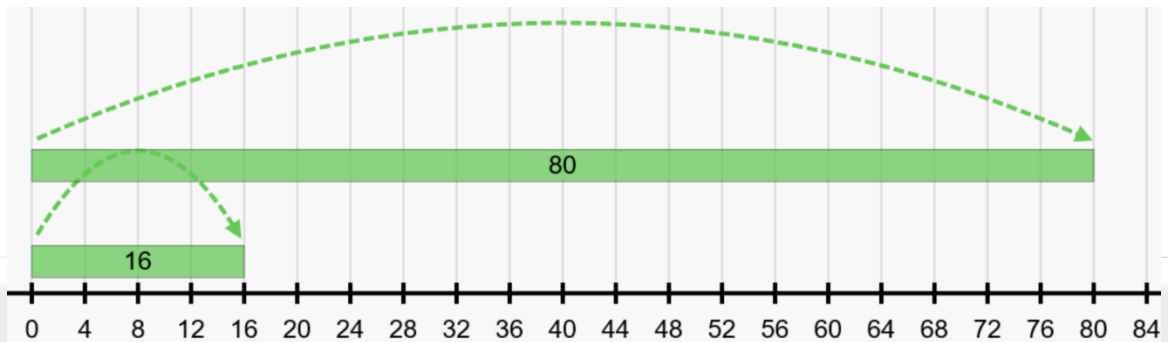
the number line below...

0.3

HINT...try to write down all the numbers close to 0.30 that would round up to 0.30, then write all the numbers just above 0.30 that would round down to 0.30

6.

Find how many of one number fits in another (Division).

Q...Below are two values represented as lengths of lines on a number line, one longer than the other. Find how many of the smaller length fits along the longer length.....is there a remainder?
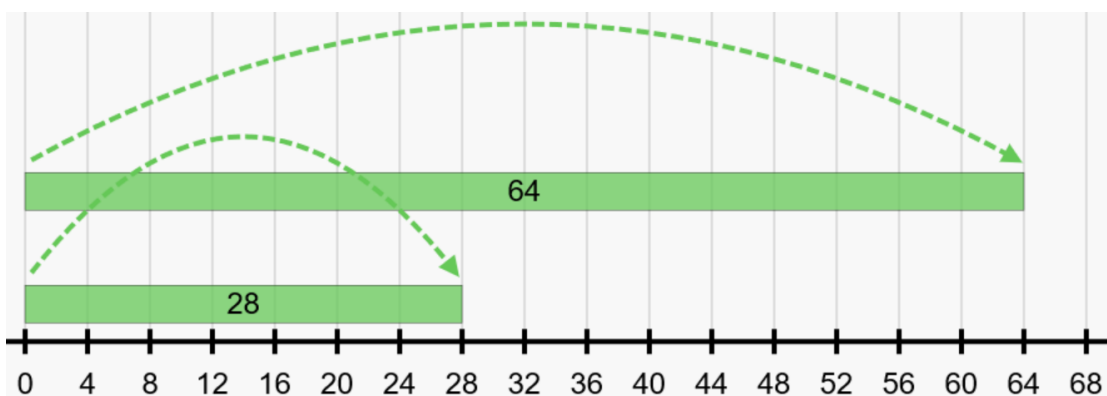

HINT... you are dividing up the 80 into how many 16's fit in, put 80 on top of the fraction and

16 on the bottom!

7.

Find one number as a fraction of another.

Q...Can you write the smaller value this time as a 'fraction' of the larger. Can you simplify your answer or write it using a decimal answer (or maybe even a %)!
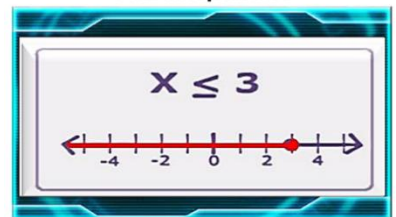
8.

N12 Inequalities

$x \leq 3$

Write an 'Inequality' for a range of numbers including negative numbers.

Go N12, watch the videos and use the resources.

Q…Shown below is an inequality. Can you write a list of all the numbers in this inequality? Can you draw the line that represents the inequality on the number line below?

$$-6 \leq x < 4$$

-8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5

HINT…try listing all the values between -6 and 4, including zero! Check if -6 and 4 are included in this list, then try drawing the number line in the third box. Don't forget the end of the inequality line has circles and sometimes these are filled in and sometimes they are empty !

END OF PREPATORY ASSIGNMENT

What to do now….

1. Ensure you have marked in each box if you feel confident in each topic or not (this will inform you and your tutor which activities you should do in the session)
2. Keep this yellow assignment with you, check with your tutor answers given
3. Add this to your folder of work IN ORDER YELLOW…GREEN…RED… (and any BLUE you achieve)!