Year 5

Select from the list below and complete one each day. Whilst completing each activity look for patterns and connections. Make sure you enjoy the activity and share it with your parents. Complete as much as you can but each activity should take no longer than an hour.

	Activity	Parent Comment
1	Roll a dice to create a 3-digit number multiplied by 2-digit multiplication question. Work out the calculation. Repeat 6 times. Can you use the digits 1-9 to create a 3-digit multiplied by a 2-digit question that will give you an answer nearest to 10 000? You can use the digits more than once. How close can you get if you can only use each digit once?	
2	Roll a dice to create a 4-digit add a 4-digit addition question. Work out the calculation. Repeat 6 times. Can you use the digits 1-9 to create a 4-digit add a 4-digit addition question that will give you an answer nearest to 10 000? You can use the digits more than once. How close can you get if you can only use each digit once?	

3	Roll a dice to create a 4-digit subtract a 4-digit question. Work out the calculation. Repeat 6 times. Can you use the digits 1-9 to create a 4-digit subtract a 4-digit subtraction question that will give you an answer nearest to 1000? You can use the digits more than once. How close can you get if you can only use each digit once?	
4	Can you create 2 mathematical statements that will always be true? Can you create 2 mathematical statements that will sometimes be true? Can you create 2 mathematical statements that will never be true? Can you convince me you are correct? Do you need to draw a picture to help you?	

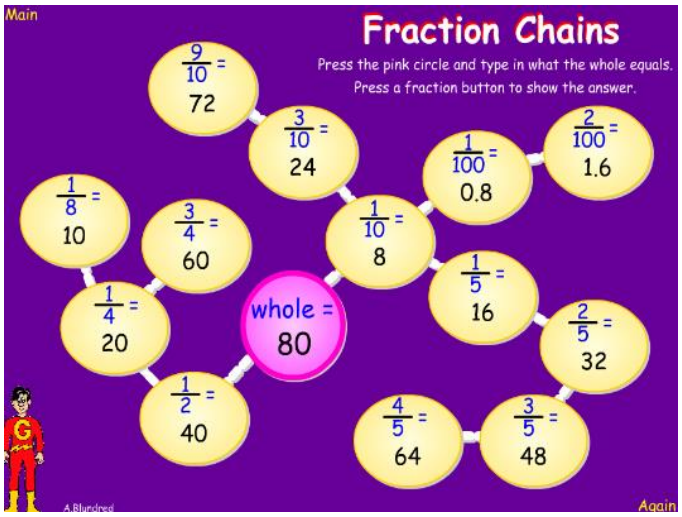
5	Roll a dice to make a 2-digit number. What are the factors of your number? Are any of them prime? What is the 10th multiple of your number? What is the 100th multiple of your number? Now make a three-digit number. What are the factors of your number? Can you use any divisibility tests to help you? https://www.mathsisfun.com/divisibility-rules.html Are any of the factors prime? Using mental and written strategies work out the answers to the following questions. • What is the 23rd multiple of your number? • What is the 46th multiple of your number? • What is the 99th multiple of your number? • What is 1/10 of your number? • What is 0.25 of your number? What other facts can you find of your number?	

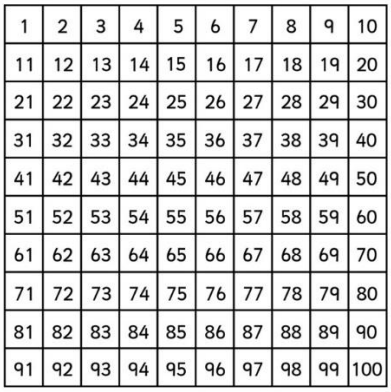
6	Roll a dice 4 times to make a four-digit number in grams. Convert the number into kg. Make another four-digit number in metres. Convert the number into km. Make another four-digit number in ml. Convert the number into litres. Have you spotted a pattern? Can you make a poster showing how to convert the different measures? Can you use a number line to show the relationships?	
7	Roll a dice 6 times. Make as many different 6-digit numbers as you can using the digits. Can you be systematic? Place the numbers in order. Can you find the difference between each of your 6-digit numbers and 1 000 000? Divide all your original numbers by 100. What is the difference between your new numbers and 10 000?	

8	Draw a number line between 0-1. Roll a dice to make the denominator in a fraction e.g. if you throw a 4 your fraction is $\frac{1}{4}$. Repeat 3 times. Place your fraction on a number line. Now roll the dice twice. Make the largest number the denominator and the smallest number the numerator. Place the fraction you have made on the number line. Repeat 5 times. Now play a game against a partner. Draw a new number line from 0-1. Roll the dice twice to make a fraction with the largest number being the denominator and the smallest number being the numerator. Take it in turn to place a fraction of the number line. Try to get three of your fractions in a row. Can you block each other? Extend to a number line from 0-6. Roll the dice twice and make a fraction. You can choose where the largest number goes this time. You may make improper fractions. Where will they be on the number line?	

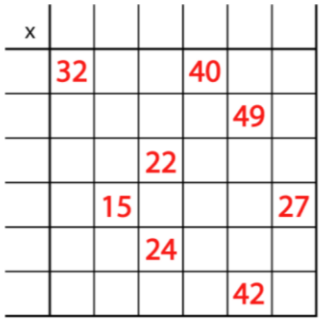
9	Investigate Can you make all square numbers up to 10 squared by adding two prime numbers together? Where is a good place to start?	
10	Choose a recipe for a set number of people. How much will the ingredients cost you to make the recipe? Which supermarket is the best one to get the ingredients from? What is the price per head at each supermarket? If you double the amount of people, does the price per head double? Can you buy different sized packs of the ingredients? What impact does this have on the price per head?	
11	Investigate Is it sometimes, always or never true that the number of lines of reflective symmetry in a regular polygon is equal to the number of sides? If so, can you explain why? Can you create your own Sometimes/ Always and Never statements about 2D or 3D shapes?	

12	How long does it take you to do 25 star jumps? Do you think you could do more star jumps in 2000 seconds or 200 minutes? How many star jumps can you do in 200 seconds? (You will need to measure this) How many could you do in 400 seconds? (Do you need to measure this or can you estimate?) If you jump at the same rate would you do more star jumps in 10000 minutes or in 4 days?	
13	Order the following calculations from easy to hard. 35 x 14 78 ÷ 6 16x25 45 x 9 23 x 8 26x50 3600 ÷ 40 75x4 Can you find at least three ways to solve each calculation? Which calculations can you solve mentally? Which calculations would you need a written method?	

14	If you know the whole is 90. What other facts can you find? Make a fraction chain similar to the one below that has been done for the number 80.  If 0.2 of the whole is 16 Can you make another fraction chain using this fact? Can you include decimals in your chain?	
15	Find 5 different cuboids in your home. Without measuring, order the boxes from the largest volume to the smallest volume. Now calculate the volume of each box. Was your order correct? Can you design a cuboid that has a volume less than 8000cm^3?	

16	Take turns to give your partner a property of number. You can cover up to 3 numbers at a time on a 100 square.  Aim is to cover four in a row while trying to block your partner. A few ideas: • Multiples of .. • Factors of … • Common multiples of .. • Common factors of … • Prime numbers • Square numbers • Odd/even numbers between … and • Numbers which are divisible by … If your grown-up needs to ask what these properties mean have you got a clear concise definition with an example? Could you create a poster?	

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

17	Investigate when the same amount of liquid in pints and litres will both be whole numbers? 1 pint is 0.57 litres Can you use a table to help you?	
18	Download Mystery Matrix from nRich https://nrich.maths.org/1070 Can you solve the problem?  	
19	Download Quadrilaterals from nRich. https://nrich.maths.org/quadrilaterals How many different quadrilaterals can be made by joining the dots on the circle? Can you name them? Can you work out the angles of all your quadrilaterals? If you have a protractor measure the angles to check.	

20	Can you work out which triangles are described below? **Who am I?** I have one right angle and no equal sides. Who am I? I have a pair of equal sides and two angles of 45 degrees. Who am I? I have one angle of 80 degrees, one of 40 degrees. Who am I? Can you make your own 'Who am I' clues about a selection of quadrilaterals for your friends to solve?	