Week beginning May 4th

**Hello!**

When we left school, we had started a unit on ratio and proportion. I want to get back to this now. I have made a short How to… video which is on the Maths section of the website and explains some of the key ideas around ratio and proportion. It also points out why it’s important for real life: some areas of Maths are not used very often in the real world, but this one definitely is. If you are confused, send me an email – the chances are that if you are confused then other people are as well, so I can do something about it if I know.

Again, don’t spend time on things that are too easy: if you need more challenge, check out the [BBC Bitesize](https://www.bbc.co.uk/bitesize/subjects/z826n39) pages (aim for Year 7 if you’ve got Year 6 sorted) or the new [Oak National Academy](https://www.thenational.academy/online-classroom/year-6/#subjects) site.

Good luck!

Mr. Davis

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| Maths Plan  **Year 6 Monday 4th May 2020** |
| *Maths: Rapid Recap*   |  |  | | --- | --- | | 1. Calculate 2/6 of 30. **30 ÷ 6 = 5**   **5 x 2 = 10** | (4) 3465 + 2543 = **6,008** | | 1. 21% of 540 = **10% is 54 and 1% is 5.4, so 20% is 108 + 1% = 113.4** | (5) 9144 ÷ 36 = **254** | | 1. 2.17 x 1,000 = **move everything across 3 spaces to match the three zeroes, so the answer is 2170. This makes sense because 1000 x 2 = 2000** | (6) Name the 2d shapes with 5 sides and 6 sides.  **A 5 sided shape is a pentagon**  **A 6 sided shape is a hexagon** |   *Ration and proportion: describing a ratio as a fraction*  Start by looking at the How to… video on the Maths section of the school website. We are going to think about how to describe a ratio as a fraction:    So, looking at the pattern above, in total there are 10 tiles. Four are red, so 4/10 are red. This can be simplified to 2/5, and if you look at the pattern you can see that the tiles are in sets of five, each with two red tiles then three yellow tiles. So, the fraction of yellow tiles is 6/10 or 3/5.  The most common mistake with ratio as a fraction is to forget what the whole is – so people often write the fraction of red tiles as 4/6 (meaning four red tiles and 6 yellow tiles) which isn’t how fractions work.  Look at this pattern. What fraction of the shapes are circles?  **15/35 or 3/7**  What fraction of the shapes are triangles?  **20/35 or 4/7**      **2/3**  **1/3**  **2/9**  **3/9**  **4/9**  **1:2**  *Reasoning*   |  |  | | --- | --- | |  |  | |

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| Maths Plan  **Year 6 Tuesday 5th May 2020** |
| *Maths: Rapid Recap*   |  |  | | --- | --- | | 1. 3 x 2/5 = 6/5 = **1 1/5** | (4) Write the number two hundred and 3 thousand, four hundred and six ones in digits:  **203,406** | | 1. 35% of 910 = **10% is 91 and so 5% is half of that which is 45.5, so 30% is 273 + 5% = 318.5**   Or I could multiply 910 x 0.35  Or I could do 35/100 x 910/1 | (5) What are the prime factors of 15 = **3 and 5** | | 1. How many edges does a cuboid have? = **12** | (6) What are each of the internal angles of an equilateral triangle?  **The internal angles of a triangle add to 180⁰. An equilateral triangle has three equal angles, so 180⁰ ÷ 3 = 60⁰** |   *Maths: Ratio and proportion*  Proportion is used to scale up something when we make more. So, for example if we need 20ml of Ribena juice and 100ml of water to make a small glass of Ribena squash, then if we made ten glasses we need ten times the amount of Ribena juice and ten times the amount of water.  We started using the language ‘For every 20ml of Ribena, there are 100ml of water. We can write this as 20:100  *Fluency:* So, using the ratio 20:100 answer these questions:   |  |  |  | | --- | --- | --- | | (7) If I use 80ml of Ribena, how much water do I need?  **80 is 4 lots of 20, so 4 x 100 = 400ml** | (8) If I have 900ml of water, how much Ribena juice do I need?  **900 is 9 lots of 100, so 9 x 20 = 180ml** | (9) Altogether, a large glass contains 360ml. How much is Ribena juice?  **So, one glass contains 20ml of Ribena juice and 100ml of water – this is 120ml altogether. So, three lots would be 360ml, which is 60ml of Ribena juice.** |   *Fluency:*    **4:5**  **5:4**  **4:2**  **6:2**  **2:4:6**  **6:2:4**    **3/10 and 7/10**  *Problem solving:*   |  |  | | --- | --- | |  |  | |

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| Maths Plan  **Year 6 Wednesday 29th April 2020** |
| *Maths: Rapid Recap*  I want to keep going over 2d shapes:  Remember these – it’s the Rapid Recap for the next two days.  Today I’d like you to use the [Maths is Fun website](https://www.mathsisfun.com/numbers/ratio.html) again to further explore ratio. There are some good questions and activities (including making a cake – scaling up recipes is one of the most important uses of ratio in real life) at the bottom of the page.  The one part I would disagree with is this section:    I think that there use of fractions here is a little confusing as it doesn’t refer to the total. Otherwise, the information is really good. |

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| Maths Plan  **Year 6 Thursday 30th April 2020** |
| *Maths: Rapid Recap: Name the quadrilateral with…*  Try not to look at the page above whilst you are writing your answers   |  |  | | --- | --- | | 1. …four sides of the same length, two pairs of parallel lines but no right angles. **A rhombus** | 1. Two pairs of parallel sides. Each pair of sides is the same length. **A parallelogram** | | 1. …four sides of the same length and four right angles. **A square** | (5) Two adjacent pairs of equal sides. **A kite** | | 1. …two parallel sides and two sides that are not parallel. **A trapezium** | (6) all sides a different length. **An *irregular quadrilateral*, or just a *quadrilateral*** |   **Did it look the same as last week – yes it did. Let’s get these solidly embedded.**  *Problem solving:*  *Work your way through the questions. From talking to one or two parents, if you get stuck, don’t spend hours wondering what to do and fretting. The whole Maths lesson should be no more than an hour. If you can’t answer the questions, stop and look at the answers, try and understand how I got the answers and let me know if you are really stuck. I’ll carry on with ratio, proportion and then probability for the next couple of weeks.*   |  |  | | --- | --- | | Answer this one carefully. Ratio means looking at the number of each. When you write a fraction, you need to look at the number of shaded squares and the total number of all squares. | 1. **1:4 or 1/5** 2. **1:1 or 1/2** 3. **1:5 or 1/6** 4. **2:4 (or 1:2) or 2/6 (or 1/3)** 5. **1:8 or 1/9** 6. **1:6 or 1/7** | | 1. There are two boys to every four girls at a swimming pool. There are 16 boys at the pool. How many girls are there? | **8 x 4 = 32 girls** | | 1. For every five adults on a bus there are three children. There are 21 children on the bus. How many people altogether? | **So, we are x 7**  **35 adults + 21 chn = 36** | | 1. 400 people attend a concert. There are seven children to every three adults. How many children are at the concert? | **7:3 = groups of 10**  **70:30=100**  **280:120 = 400**  **So, 280 children** | | 1. One in every thirty raffle tickets won a prize. There were 600 tickets sold. How many tickets won prizes? | **1/30 = 2/60 = 20/600 so 20 tickets** | | 1. In a test, Rachel answered seven questions correctly to every five she answered wrongly. There were 60 questions in the test. How many did she get right? | **7:5 = groups of 12**  **So 5 x 12 = 60**  **Multiply by 5**  **7 x 5 = 35 right** | |