**Year 10 Maths ‘at home learning’ resource**

**Task: Aim to complete one activity a day to help support and further your revision and subject knowledge.**

**Useful websites**

To assist with your learning you could use:

<https://vle.mathswatch.co.uk/vle/> (there is 10 hours’ worth of work on there too!)

Username: r21surnamef@rosebridge (e.g. for John Smith: r21smithj@rosebridge)

Password: same as your username (e.g. for John Smith: r21smithj@rosebridge)

<https://www.bbc.co.uk/bitesize>

<https://corbettmaths.com/>

<https://www.mathsgenie.co.uk/gcse.html>

**Key Topics to revise:**

Number

Algebra

Shape

Data and probability

Ratio and proportion

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| Create a poster showing how to perform the multiplication of a 3 digit decimal number by a 2 digit decimal number (Grid method or vertical method) CMQ- work out how Chinese multiplication works. Research Napier’s Bones | Create a BIDMAS worksheet with answers on the back. Give examples showing how BIDMAS should be used. | Create poster to showing how to add, subtract, multiply and divide fractions  Also include how you should add/subtract/multiply/divide mixed number fractions. | Create a revision card to show how to find the HCF for two numbers using the listing techniques.  CMQ-Create one context question where you have to find the HCF. | Find the lowest common multiple of the ages of everyone in your house. | Create a PowerPoint for a Y7 pupil showing them how to add and subtract negative numbers. The PowerPoint needs to start with easier questions and progressively get harder (two signs in the middle of the question. Eg 4 + -5 | Create a PowerPoint for a Y7 pupil showing how to multiply and divide negative numbers. | Create a fraction of an amount worksheet. Include 20 questions that progressively get harder. Answers should be included on the back. |
| Draw a poster showing the different types of quadrilaterals and their properties include symmetry and rotational symmetry | Create a lesson showing how to teach a Y8 class: -  - Angle sum for a polygon  - Interior angle of a regular polygon.  - Exterior angle of a regular polygon | Create an “angles in parallel lines” quiz. Include: -  Alternate angles Corresponding angles. Co-interior angles  There needs to be 20 questions | Make a poster about bearings and how they can be used at sea to navigate from port to port. Research what happens in real life and what can have an effect of the bearing that is plotted | Create a PowerPoint showing evaluations of famous buildings. | Practise constructing an angle bisector | Practise constructing a perpendicular bisector | Practise constructing a perpendicular line that does not pass through the midpoint |
| Create a revision card to explain how to factorise a simple algebraic expression using the HCF outside the bracket | Create a factorising simple expressions work sheet with an example at the start and answers on the back  Questions should look like this  2x + 12  3x2+ 12x | Create a poster with step by step list of instructions to explain to another pupil how to factorise a quadratic expression | Research how to factorise a quadratic expression using the Quadratic Formula. Create a step by step guide to explain to another pupil when and how to use this technique | Create a poster showing how to transform shapes using: -   * Reflection * Rotation | Create a poster showing how to transform shapes using a vector | Create a poster showing all the steps to transform a shape by enlarging. Show how vectors can be used when using a centre of enlargement | Create a poster on how to calculate the area of plane shapes (rectangle/triangle/circle/ parallelogram/ trapezium) |
| Calculate the speed of the fastest animals on land, sea and in the air. How long would they take to cover 100m at their top speed? Research Usain Bolt’s top speed. If he did the 100m at that speed how long would it take him to complete 100m | Research the speed of the fastest transport on land, sea and in the air. How long would they take to cover 100m at their top speed? | Create a poster showing how to rearrange formulae using the algebra balancing equations skills.  CMQ-Investigate formulae that need factorising when rearranging | Create a step by step guide on how to simplify a ratio | Create poster showing how to split an amount using a ratio. Show using the bar modelling technique (can be found on revision websites) | Create a ratio worksheet with answers on the back that has questions on how to simplify a ratio and how to split using a ratio. Include context problems at the end | Solve 10 proportion context questions that need the unitary method to solve from a shopping bill.  E.g. If 5 mars bars cost £1.25 how much did 1 cost? | Create a frequency table to collect data and collect some data using it.  E.g. Watch the news – how many times particular words are mentioned. Also create a diagram to show the data. |