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| **Maths**  |
| **Statistics**  |
| **Financial maths**  |
| **Basic STEM support**  |



**DP19814**: **Online ‘Bitesize’ Maths, Financial Maths and Statistics programme 2021 – 2022**

Each 15-30 minute session in this programme is standalone, non-credit bearing and delivered via MS Teams. Each session consists of a live presentation covering definitions, formulas and applications on a specific topic, followed by the opportunity for student questions.

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| **Autumn Term** |
| **Week** | **Date** | **Time** | **Topic** |
| -1 | Monday 13th September | XXXXX | XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX |
| -1  | Tuesday 14th September | 12pm | **Units of measure**  |
| -1  | Wednesday 15th September | 12pm | **Fractions** |
| -1  | Thursday 16th September | 12pm | **Percentages**  |
| -1  | Friday 17th September  | 12pm | **Strengths of solutions** |
|  |  |  |  |
| 0  | Monday 20th September | 2pm | **Financial calculations** |
| 0  | Tuesday 21st September | 2pm | **Mixing solutions** |
| 0 | Wednesday 22nd Sept. | XXXXX | XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX |
| 0  | Thursday 23rd September | 2pm | **Rearranging formulas** |
| 0 |  Friday 24th September | 2pm | **Serial dilutions** |
|  |  |  |  |
| 1 | Monday 27th September | 3pm | **Units of measure** |
| 1 | Tuesday 28th September | 3pm | **Fractions** |
| 1 | Wednesday 29th Sept | 3pm | **Changing solution strengths** |
| 1 | Thursday 30th September | 3pm | **Percentages** |
| 1 | Friday 1st October | 10am | **Basic Algebra for non-mathematicians (maths)** |
|  |  |  |  |
| 2 | Monday 4th October | 12pm | **Financial calculations** |
| 2 | Tuesday 5th October  | 12pm | **Strengths of solutions** |
| 2 | Wednesday 6th October | 12pm | **Serial dilutions** |
| 2 | Thursday 7th October  | 12pm | **Rearranging formulas** |
| 2 | Friday 8th October  | 10am | **How to organise mathematical proofs (maths)** |
|  |  |  |  |
| 3 | Monday 11th October  | 12pm | **Descriptive statistics** **(statistics)** |
| 3 | Tuesday 12th October | 12pm | **Interest rates (financial)** |
| 3 | Wednesday 13th October | XXXXX | XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX |
| 3 | Thursday 14th October | 1pm | **Equations of value (financial)** |
| 3 | Friday 15th October | 10am | **Composition of functions (maths)** |
|  |  |  |  |
| 4 | Monday 18th October | 2pm | **Units of measure**  |
| 4 | Tuesday 19th October | 2pm | **Fractions** |
| 4 | Wednesday 20th October | 2pm | **Mixing solutions** |
| 4 | Thursday 21st October | 2pm | **Percentages**  |
| 4 | Friday 22nd October  | 10am | **Proof method mathematical induction (maths)** |
|  |  |  |  |
| 5 | Monday 25th October | 1pm | **Financial calculations** |
| 5 | Tuesday 26th October | 1pm | **Serial dilutions** |
| 5 | Wednesday 27th October | 1pm | **Changing solution strengths** |
| 5 | Thursday 28th October | 1pm | **Rearranging formulas** |
| 5 | Friday 29th October  | 10am | **Matrix & equations (maths)**  |
|  |  |  |  |
| 6 | Monday 1st November  | 12pm | **ANOVA – multiple group comparison (stats)** |
| 6 | Tuesday 2nd November | 12pm | **Binomial Pricing Model (financial)** |
| 6 | Wednesday 3rd November | XXXXX | XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX |
| 6 | Thursday 4th November  | 1pm | **Newton-Rhapson method (financial)** |
| 6 | Friday 5th November  | 10am | **Rules for Differentiation - Part 1 (maths)** |
|  |  |  |  |
| 7 | Monday 8th Nov | 12pm | **Hypothesis Testing (statistics)** |
| 7 | Tuesday 9th Nov  | 12pm | **Options (financial)** |
| 7 | Wednesday 10th Nov. | XXXXX | XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX |
| 7 | Thursday 11th November | 1pm | **Measures of Investment Risk (financial)** |
| 7 | Friday 12th November | 10am | **Partial Derivatives - Part 2 (maths)** |
|  |  |  |  |
| 8 | Monday 15th Nov | 12pm | **Chi-square (statistics)** |
| 8 | Tuesday 16th Nov  | 12pm | **Basic Annuities (financial)** |
| 8 | Wednesday 17th Nov. | XXXXX | XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX |
| 8 | Thursday 18th November | 1pm | **Black-Scholes-Merton (financial)** |
| 8 | Friday 19th November | 10am | **Integration (maths)** |
|  |  |  |  |
| 9 | Monday 22nd Nov  | 12pm | **Simple linear regression (statistics)** |
| 9 | Tuesday 23rd November  | 12pm | **Implied Volatility (financial)** |
| 9 | Wed 24th November  | XXXXX | XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX |
| 9 | Thursday 25th November  | 1pm | **Dividend Discount Model (financial)** |
| 9 | Friday 26th November  | 10am | **Logic (maths)** |
|  |  |  |  |
| 10 | Monday 29th November | 12pm | **Multiple regression (statistics)** |
| 10 | Tuesday 30th November  | 1pm | **Mean Variance Portfolio Theory (financial)** |
| 10 | Wednesday 1st December  | XXXXX | XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX |
| 10 | Thursday 2nd December  | 12pm | **Brownian Motion (financial)** |
| 10 | Friday 3rd December  | 10am | **Differentiation (maths)** |
|  |  |  |  |
| **Spring Term** |
| **Week** | **Date** | **Time** | **Topic** |
| 14 | Monday 24th January | 12pm | **Units of measure**  |
| 14 | Tuesday 25th January | 12pm | **Fractions** |
| 14 | Wednesday 26th Jan | 12pm | **Strengths of solutions** |
| 14 | Thursday 27th January | 12pm | **Percentages**  |
| 14 | Friday 28th January  | 10am | **Basic Algebra for non-mathematicians (maths)** |
|  |  |  |  |
| 15 | Monday 31st January | 2pm | **Financial calculations** |
| 15 | Tuesday 1st February | 2pm | **Serial dilutions**  |
| 15 | Wednesday 2nd Feb | 2pm | **Changing solution strengths** |
| 15 | Thursday 3rd February | 2pm | **Rearranging formulas** |
| 15 | Friday 4th February  | 10am | **Composition of functions (maths)** |
|  |  |  |  |
| 16 | Monday 7th February  | 12pm | **Normal Distribution (statistics)** |
| 16 | Tuesday 8th February  | 1pm | **Interest rates (financial)** |
| 16 | Wednesday 9th February  | XXXXX | XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX |
| 16 | Thursday 10th February  | 12pm | **Mean Variance Portfolio Theory (financial)** |
| 16 | Friday 11th February  | 10am | **How to organise mathematical proofs (maths)** |
|  |  |  |  |
| 17 | Monday 14th February  | 12pm | **ANOVA – multiple group comparison (statistic)** |
| 17 | Tuesday 15th February  | 1pm | **Equations of value (financial)** |
| 17 | Wednesday 16th February  | XXXXX | XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX |
| 17 | Thursday 17th February  | 12pm | **Dividend Discount Model (financial)** |
| 17 | Friday 18th February  | 10am | **Proof method mathematical induction (maths)** |
|  |  |  |  |
| 18 | Monday 21st February  | 12pm | **Mixed effects models (statistics)** |
| 18 | Tuesday 22nd February  | 1pm | **Basic Annuities (financial)** |
| 18 | Wednesday 23rd February  | XXXXX | XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX |
| 18 | Thursday 24th February  | 12pm | **Options (financial)** |
| 18 | Friday 25th February  | 10am | **Rules for Differentiation - Part 1 (maths)** |
|  |  |  |  |
| 19 | Monday 28th February  | 12pm | **Chi-Square test (statistics)** |
| 19 | Tuesday 1st March | 1pm | **Measures of Investment Risk (financial)** |
| 19 | Wednesday 2nd March | XXXXX | XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX |
| 19 | Thursday 3rd March | 12pm | **Normal distribution (financial/stats)** |
| 19 | Friday 4th March | 10am | **Partial Derivatives - Part 2 (maths)** |
|  |  |  |  |
| 20 | Monday 7th March  | 12pm | **Normal Distribution (statistics)** |
| 20 | Tuesday 8th March | 1pm | **Black-Scholes-Merton (financial)** |
| 20 | Wednesday 9th March | XXXXX | XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX |
| 20 | Thursday 10th March  | 12pm | **Brownian Motion (financial)** |
| 20 | Friday 11th March | 10am | **Logic (maths)** |
|  |  |  |  |
| 21 | Monday 14th March  | 12pm | **Mixed effects models (statistics)** |
| 21 | Tuesday 15th March | 1pm | **Implied Volatility (financial)** |
| 21 | Wednesday 16th March | XXXXX | XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX |
| 21 | Thursday 17th March  | 12pm | **Binomial Pricing Model (financial)** |
| 21 | Friday 18th March | 10am | **Matrix & Equations (maths)** |
|  |  |  |  |
| 22 | Friday 25th March | 10am | **Integration (maths)** |
|  |  |  |  |