# Subject: Mathematics

# Year 8 Autumn Term
**(Half Term 1)**

# Assessment Date
**(Week beginning – 21st October)**

## Knowledge to be Assessed

| Topic | Unit Code |
|---|---|
| Rounding (Decimal Places & Significant Figures) | 1.1 |
| Upper & Lower Bounds (Introduction) | 1.2 |
| Upper & Lower Bounds (Understanding) | 1.3 |
| Four Operations (Negative Numbers) | 2.1 |
| Multiplying (Integers & Decimals) | 2.2 |
| Dividing (Integers) | 2.3 |
| Dividing (Decimals) | 2.4 |
| Dividing (Recurring Decimal) | 2.5 |
| BODMAS | 2.6 |
| Generating Sequences (Term to Term Rule) | 3.1 |
| Generating Sequences (Position to Term Rule) | 3.2 |
| nth Term | 3.3 |
| Positive Indices | 3.4 |
| Index Laws (Positive Indices) | 3.5 |
| Index Laws (Negative Indices & Harder Simplification) | 3.6 |
| Prime Factorisation | 3.7 |
| HCF & LCM | 3.8 |
| HCF & LCM (Using Prime Factorisation) | 3.9 |
| Write Expressions, Inequalities & Equations | 4.1 |
| Collecting Terms (Involving Indices) | 4.2 |
| Expand a Single Bracket | 4.3 |
| Factorising Expressions | 4.4 |
| Simplifying Expressions | 4.5 |

## Skills to be Assessed

**Use and apply standard techniques:**
- Accurately recall facts, terminology, and definitions.
- Use and interpret notation correctly.
- Accurately carry out routine procedures or set tasks requiring multi-step solutions.

**Reason, interpret and communicate mathematically:**
- Make deductions, inferences and draw conclusions from mathematical information.
- Construct chains of reasoning to achieve a given result.
- Interpret and communicate information accurately.
- Present arguments and proofs.
- Assess the validity of an argument and critically evaluate a given way of presenting information.

**Solve problems within mathematics and in other contexts:**
- Translate problems in mathematical or non-mathematical contexts into a process or a series of mathematical processes.
- Make and use connections between different parts of mathematics.
- Interpret results in the context of the given problem.
- Evaluate methods used and results obtained.
- Evaluate solutions to identify how they may have been affected by assumptions made.

## Resources to help Revision

MyMaths https://www.mymaths.co.uk/

| Tasks | Unit Code |
|---|---|
| MyMaths - Decimal Places / Significant Figures | 1.1 |
| MyMaths - Upper & Lower Bounds 1 | 1.2 |
| MyMaths - Negative Numbers 2 | 2.1 |
| MyMaths - Short & Long Multiplication / Multiply Two Decimals | 2.2 |
| MyMaths - Short Division / Long Division | 2.3 |
| MyMaths - Dividing Decimals by Whole Numbers / Dividing a Decimal by a Decimal | 2.4 |
| MyMaths - Recurring Decimals 1 | 2.5 |
| MyMaths - Order of Operations | 2.6 |
| MyMaths - Squares and Cubes | 3.4 |
| MyMaths - Indices 1 | 3.5 |
| MyMaths - Indices 2 | 3.6 |
| MyMaths - Highest Common Factor / Lowest Common Multiple | 3.9 |
| MyMaths - Simplifying 1 | 4.2 |
| MyMaths - Single Brackets | 4.3 |
| MyMaths - Factorising Linear | 4.4 |

## Grade Descriptors: How is the assessment graded?

| Emerging | Developing | Secure | Mastering | Extending |
|---|---|---|---|---|
| Student show a basic knowledge of mathematics.<br><br>Students demonstrate an understanding of less than 25% of content. | Students show partial knowledge of mathematics.<br><br>Students demonstrate an understanding between 25% and 40% of the content. | Students show secure knowledge of mathematics.<br><br>Students demonstrate an understanding of between 40% and 60% of the content. | Students show very good knowledge of mathematics.<br><br>Students demonstrate an understanding of between 60% and 75% of the content. | Students show comprehensive knowledge of mathematics.<br><br>Students demonstrate an understanding of more than 75% of content. |

# Subject: Mathematics

# Year 8 Autumn Term
**(Half Term 2)**

# Assessment Date
**(Week beginning – 9th December)**

## Knowledge to be Assessed

| Topic | Unit Code |
|---|---|
| Identifying Angles | 5.1 |
| Properties of Triangles | 5.2 |
| Properties of Quadrilaterals | 5.3 |
| Angles in Parallel Lines | 5.4 |
| Angle Reasoning (Including Parallel Lines) | 5.5 |
| Polygons (Interior Angles) | 5.6 |
| Polygons (Interior & Exterior Angles) | 5.6 |
| Angle Reasoning (Including Interior & Exterior Angles) | 5.7 |
| Mixed Number Conversion | 6.1 |
| Adding & Subtracting Fractions | 6.2 |
| Muliplying & Dividing Fractions | 6.3 |
| Four Operations involving Mixed Numbers | 6.4 |
| Theoretical Probability | 7.1 |
| Missing Probabilities | 7.2 |
| Combined Outcomes | 7.3 |
| Venn Diagrams (Interpreting) | 7.4 |
| Venn Diagrams (Constructing) | 7.5 |

## Skills to be Assessed

**Use and apply standard techniques:**
- Accurately recall facts, terminology, and definitions.
- Use and interpret notation correctly.
- Accurately carry out routine procedures or set tasks requiring multi-step solutions.

**Reason, interpret and communicate mathematically:**
- Make deductions, inferences and draw conclusions from mathematical information.
- Construct chains of reasoning to achieve a given result.
- Interpret and communicate information accurately.
- Present arguments and proofs.
- Assess the validity of an argument and critically evaluate a given way of presenting information.

**Solve problems within mathematics and in other contexts:**
- Translate problems in mathematical or non-mathematical contexts into a process or a series of mathematical processes.
- Make and use connections between different parts of mathematics.
- Interpret results in the context of the given problem.
- Evaluate methods used and results obtained.
- Evaluate solutions to identify how they may have been affected by assumptions made.

## Resources to help Revision

MyMaths https://www.mymaths.co.uk/

| Tasks | Unit Code |
|---|---|
| MyMaths - Angles 2 / Angles 3 / Angles 4 | 5.1 |
| MyMaths - Angles in Parallel Lines | 5.4 |
| MyMaths - Angles Reasoning / Angle Sums | 5.5 |
| MyMaths - Interior Exterior Angles | 5.7 |
| MyMaths - Introducing Improper & Mixed Fractions / Improper & Mixed Fractions | 6.1 |
| MyMaths - Adding Subtracting Fractions | 6.2 |
| MyMaths - Starting to Multiply Fractions / Multiplying Fractions by Fractions / Multiply Divide Fractions Intro | 6.3 |
| MyMaths - Multiplying Fractions / Dividing Fractions / Mixed Numbers | 6.4 |
| MyMaths - Simple Probability | 7.1 |
| MyMaths - Venn Diagrams 1 | 7.4 |
| MyMaths - Venn Diagrams 2 | 7.5 |

## Grade Descriptors: How is the assessment graded?

| Emerging | Developing | Secure | Mastering | Extending |
|---|---|---|---|---|
| Student show a basic knowledge of mathematics.<br><br>Students demonstrate an understanding of less than 25% of content. | Students show partial knowledge of mathematics.<br><br>Students demonstrate an understanding between 25% and 40% of the content. | Students show secure knowledge of mathematics.<br><br>Students demonstrate an understanding of between 40% and 60% of the content. | Students show very good knowledge of mathematics.<br><br>Students demonstrate an understanding of between 60% and 75% of the content. | Students show comprehensive knowledge of mathematics.<br><br>Students demonstrate an understanding of more than 75% of content. |

# Subject: Mathematics

# Year 8 Spring Term
**(Half Term 3)**

# Assessment Date
**(Week beginning – 10th February)**

## Knowledge to be Assessed

| Topics | Unit Code |
|---|---|
| Function Machines | 8.1 |
| Logic Puzzles | 8.2 |
| Solving Equations (Multi-Step) | 8.3 |
| Solving Equations (Brackets) | 8.4 |
| Solving Equations (Both Sides) | 8.5 |
| Construct & Solve Equations | 8.6 |
| Algebraic Thinking | 8.7 |
| Substitution | 8.8 |
| Substitution (Including Powers) | 8.9 |
| Grouping Data | 9.1 |
| Median & Range | 9.2 |
| Mean & Mode | 9.3 |
| Median from Frequency Tables | 9.4 |
| Mean from Frequency Tables | 9.5 |
| Scatter Graphs (Construct) | 9.6 |
| Scatter Graphs (Interpret) | 9.7 |
| Pie Charts (Construct) | 9.8 |
| Pie Charts (Interpret) | 9.9 |

## Skills to be Assessed

**Use and apply standard techniques:**
- Accurately recall facts, terminology, and definitions.
- Use and interpret notation correctly.
- Accurately carry out routine procedures or set tasks requiring multi-step solutions.

**Reason, interpret and communicate mathematically:**
- Make deductions, inferences and draw conclusions from mathematical information.
- Construct chains of reasoning to achieve a given result.
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- Present arguments and proofs.
- Assess the validity of an argument and critically evaluate a given way of presenting information.

**Solve problems within mathematics and in other contexts:**
- Translate problems in mathematical or non-mathematical contexts into a process or a series of mathematical processes.
- Make and use connections between different parts of mathematics.
- Interpret results in the context of the given problem.
- Evaluate methods used and results obtained.
- Evaluate solutions to identify how they may have been affected by assumptions made.

## Resources to help Revision

MyMaths https://www.mymaths.co.uk/

| Tasks | Unit Code |
|---|---|
| MyMaths - Function Machines | 8.1 |
| MyMaths - Introduction to Algebra | 8.2 |
| MyMaths - One-Step / Multi-Step | 8.3 |
| MyMaths - Brackets | 8.4 |
| MyMaths - Both Sides | 8.5 |
| MyMaths - Algebraic Thinking | 8.7 |
| MyMaths - Substitution 1 | 8.8 |
| MyMaths - Substitution 2 | 8.9 |
| MyMaths - Grouping Data | 9.1 |
| MyMaths - Median & Range | 9.2 |
| MyMaths - Mean & Mode / All Averages | 9.3 |
| MyMaths - Median, Mode from Frequency Tables | 9.4 |
| MyMaths - Mean from Frequency Tables | 9.5 |
| MyMaths - Scatter Graphs | 9.6 |
| MyMaths - Drawing Pie Charts | 9.8 |
| MyMaths - Reading Pie Charts | 9.9 |

## Grade Descriptors: How is the assessment graded?

| Emerging | Developing | Secure | Mastering | Extending |
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# Subject: Mathematics

# Year 8 Spring Term
**(Half Term 4)**

# Assessment Date
**(Week beginning – 31st March)**

## Knowledge to be Assessed

| Topics | Unit Code |
|---|---|
| Perimeter of Polygons | 10.1 |
| Area of Squares & Rectangles | 10.2 |
| Area of a Parallelogram | 10.3 |
| Area of a Triangle | 10.4 |
| Area of a Trapezium | 10.5 |
| Circumference of a Circle | 10.6 |
| Area of a Circle | 10.7 |
| Volume of a Cuboid | 10.8 |
| Volume of Prisms & Cylinders | 10.9 |
| Surface Area of a Cuboid | 10.10 |
| FDP (Fractions and Percentages) | 11.1 |
| FDP (Decimals and Percentages) | 11.2 |
| FDP (Ordering) | 11.3 |
| Percentages of Amounts (Calculator) | 11.4 |
| Percentage Increase/Decrease (Calculator) | 11.5 |
| Calculate Percentage Change | 11.6 |
| Calculate Original Amount | 11.7 |

## Skills to be Assessed

**Use and apply standard techniques:**
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**Reason, interpret and communicate mathematically:**
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- Make and use connections between different parts of mathematics.
- Interpret results in the context of the given problem.
- Evaluate methods used and results obtained.
- Evaluate solutions to identify how they may have been affected by assumptions made.

## Resources to help Revision

MyMaths https://www.mymaths.co.uk/

| Tasks | Unit Code |
|---|---|
| MyMaths - Perimeter | 10.1 |
| MyMaths - Area of Rectangles | 10.2 |
| MyMaths - Area of a Parrallelogram | 10.3 |
| MyMaths - Area of a Triangle | 10.4 |
| MyMaths - Area of a Trapezium | 10.5 |
| MyMaths - Circumference of a Circle (Small Step) | 10.6 |
| MyMaths - Area of a Circle (Small Step) | 10.7 |
| MyMaths - Volume & Capacity / Volume of Cuboids & Cubes | 10.8 |
| MyMaths - Volume of Prisms / Volume of Cylinders | 10.9 |
| MyMaths - Surface Area of a Cube / Surface Area of a Cuboid | 10.10 |
| MyMaths - Frac dec perc 1 | 11.2 |
| MyMaths - Frac dec perc 2 | 11.3 |
| MyMaths - Percentages of Amounts 1 / Percentages of Amounts 2 | 11.4 |
| MyMaths - Percentage Change 1 | 11.5 |
| MyMaths - Change as a Percentage | 11.6 |
| MyMaths - Reverse Percentages | 11.7 |

## Grade Descriptors: How is the assessment graded?

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|---|---|---|---|---|
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