



THIRD SPACE  
LEARNING

# Mathematics Paper Index Higher Tier

AQA

SET 2

# The resource in a nutshell

This resource summarises the GCSE maths advance information provided by **AQA** for the 3 higher papers.

The topics in **bold** show which topics appear on both foundation and higher papers.

*Please note, the papers are an example to help revision, these topics can be tested in other ways and other topics may be included in the actual papers.*

## Additional 2023 GCSE maths revision support from Third Space Learning

**Free topic-based** [GCSE maths revision lessons](#) including worked examples, common misconceptions and practice GCSE questions:

[Algebra](#)[Statistics](#)[Number](#)[Ratio and proportion](#)[Geometry](#)[Probability](#)

**Free downloadable topic-based** [GCSE maths worksheets](#) containing functional and applied reasoning questions, practice GCSE questions and word problems. All worksheets include answers and mark schemes.

**Personalised** [online one to one GCSE maths tuition](#) delivered by specialist tutors and designed to guide students through GCSE-style questions on the topics they struggle most with. Available with a subsidy through the [National Tutoring Programme](#).

The topics in **bold** appear on both the foundation and higher papers. The numbers in **bold** show the question number that the topic relates to.

	Number	Ratio	Algebra	Geometry	Probability	Statistics
Paper 1	<ul style="list-style-type: none"> <li>Decimal arithmetic <b>5</b></li> <li>Fractions, Decimals, Percentages <b>1, 6</b></li> <li>Lowest Common Multiple <b>4</b></li> <li>Negative indices <b>12</b></li> <li>Fractional indices <b>12</b></li> <li>Simplifying surds <b>20</b></li> <li>Rationalise denominator <b>20</b></li> <li>Standard form conversion <b>7</b></li> <li>Standard form calculation <b>7</b></li> </ul>	<ul style="list-style-type: none"> <li>Direct proportion <b>5</b></li> <li>Inverse proportion <b>17</b></li> <li>Percentage to ratio <b>14</b></li> <li>Capture-recapture <b>19</b></li> </ul>	<ul style="list-style-type: none"> <li>Simplify expression <b>18</b></li> <li>Equation to fraction <b>11</b></li> <li>Algebraic fractions <b>18</b></li> <li>Factorise quadratic <b>18</b></li> <li>Substitution <b>23</b></li> <li>Solve quadratic <b>23</b></li> <li>Inequality regions <b>15</b></li> <li>Straight line graph <b>15</b></li> <li>Plot inequalities <b>15</b></li> <li>Complete the square <b>22</b></li> <li>Turning point <b>22</b></li> <li>Inverse and composite functions <b>23</b></li> <li>Midpoint <b>3</b></li> <li>Geometric sequence <b>9</b></li> </ul>	<ul style="list-style-type: none"> <li>Area of a kite <b>10</b></li> <li>Perimeter <b>16</b></li> <li>Circumference of a circle <b>16</b></li> <li>Volume <b>24</b></li> <li>Exact trig values <b>10</b></li> <li>Trigonometry <b>10</b></li> <li>Circle theorems <b>21</b></li> </ul>	<ul style="list-style-type: none"> <li>Probability <b>8</b></li> <li>Expected outcomes <b>8</b></li> </ul>	<ul style="list-style-type: none"> <li>Pie chart <b>5</b></li> <li>Box plot <b>2</b></li> <li>Cumulative frequency <b>13</b></li> <li>Median <b>13</b></li> <li>Range <b>2</b></li> </ul>
Paper 2	<ul style="list-style-type: none"> <li>Rounding to decimal places <b>9</b></li> <li>Money problem <b>12</b></li> <li>Reverse percentages <b>13</b></li> <li>Compound change <b>13</b></li> <li>Comparing fractions <b>14</b></li> <li>Product rule for counting <b>16</b></li> <li>Bounds <b>15</b></li> </ul>	<ul style="list-style-type: none"> <li>Direct proportion <b>7</b></li> <li>Use of ratio <b>19</b></li> <li>Percentage increase <b>6</b></li> </ul>	<ul style="list-style-type: none"> <li>Mathematical terminology <b>1</b></li> <li>Algebraic ratio <b>4</b></li> <li>Changing the subject <b>11</b></li> <li>Expand double brackets <b>23</b></li> <li>Solve linear equation <b>21</b></li> <li>Solve quadratic <b>21</b></li> <li>Simultaneous equations <b>8</b></li> <li>Non linear graphs <b>2</b></li> <li>Linear sequence <b>18</b></li> <li>Non linear sequence <b>18</b></li> <li>Laws of indices <b>21</b></li> <li>Proof <b>23</b></li> </ul>	<ul style="list-style-type: none"> <li>Area of a quadrilateral <b>6</b></li> <li>Volume of a cone <b>24</b></li> <li>Pythagoras theorem <b>9</b></li> <li>Trigonometry <b>9</b></li> <li>Cosine rule <b>25</b></li> <li>Transformations <b>17</b></li> <li>Area and volume of similar shapes <b>24</b></li> <li>Bearings <b>25</b></li> <li>Vector calculation <b>10</b></li> <li>Congruence <b>3</b></li> <li>Congruent triangles <b>3</b></li> <li>Perimeter <b>15</b></li> <li>Sine rule <b>25</b></li> </ul>	<ul style="list-style-type: none"> <li>Probability <b>14</b></li> <li>Independent events <b>14</b></li> <li>Listing outcomes <b>14</b></li> </ul>	<ul style="list-style-type: none"> <li>Scatter diagram <b>5</b></li> <li>Histogram <b>22</b></li> <li>Mean <b>20</b></li> </ul>
Paper 3	<ul style="list-style-type: none"> <li>Money problem <b>11</b></li> <li>One number as a percentage of another <b>3</b></li> <li>Product of prime factors <b>14</b></li> <li>Types of numbers <b>14</b></li> <li>Iterative process <b>17</b></li> <li>Error interval <b>2</b></li> <li>Standard form calculation <b>9</b></li> <li>Recurring decimal to fraction <b>19</b></li> <li>Multiplying decimals <b>12</b></li> </ul>	<ul style="list-style-type: none"> <li>Write ratio <b>10</b></li> <li>Use of ratio <b>11</b></li> <li>Percentage increase <b>15</b></li> <li>Percentage change <b>15</b></li> <li>Pressure <b>15</b></li> <li>Convert units (area) <b>4</b></li> </ul>	<ul style="list-style-type: none"> <li>Substitution <b>9</b></li> <li>Write linear inequality <b>8</b></li> <li>Expand multiple brackets <b>13</b></li> <li>Solve linear inequality <b>8</b></li> <li>Speed time graph <b>18</b></li> <li>Gradient of curve <b>18</b></li> <li>Equation of a circle <b>21</b></li> <li>Distance between 2 points <b>21</b></li> <li>Trig graphs <b>23</b></li> <li>Transformations of graphs <b>23</b></li> <li>Laws of indices <b>5</b></li> </ul>	<ul style="list-style-type: none"> <li>Area <b>11</b></li> <li>Circumference of a circle <b>21</b></li> <li>Angles in a polygon <b>7</b></li> <li>Angles in parallel lines <b>20</b></li> <li>Circle theorems <b>20</b></li> <li>3D Pythagoras theorem <b>24</b></li> <li>Surface area <b>8</b></li> <li>Vectors <b>22</b></li> <li>Angles in a triangle <b>7, 20</b></li> <li>Area under a graph <b>18</b></li> </ul>	<ul style="list-style-type: none"> <li>Relative frequency <b>1</b></li> <li>Probability tree <b>12</b></li> <li>Independent events <b>12</b></li> <li>Conditional probability <b>16</b></li> <li>Venn diagram <b>16</b></li> <li>Set notation <b>16</b></li> </ul>	<ul style="list-style-type: none"> <li>Mean from a table <b>6</b></li> </ul>

# Help ease the pressure with a personalised revision programme for each of your target KS4 students

Our one to one GCSE revision programme is designed to help your target students reach their potential in their GCSE maths exams.

Our specialist maths tutors work one to one with each student, focusing on securing core KS4 content and building familiarity with the kinds of questions they'll be tackling in their GCSE exams.

Get in touch today:

✉ [hello@thirdspacelearning.com](mailto:hello@thirdspacelearning.com)

🔍 [thirdspacelearning.com](https://thirdspacelearning.com)

☎ 0203 771 0095