Exam advice
- Make sure you have all the necessary equipment
- Write in black or blue ink
- For diagrams use an HB pencil, but it should not be too sharp
- Add to diagrams if appropriate
- Underlining key words in the question may help to focus your mind
- Show all your workings in the space provided for each question
- Don’t alter your working – cross it out and replace it
- Don’t give the markers a choice of answers or methods
- Before rounding, show more figures than the question asks for
- Make a rough estimate of calculations. When estimating work to 1sf.
- Whenever possible, ask yourself “is my answer sensible?”
- Check your answers
- Don’t take measurements from a diagram, if you are told that it is not accurately drawn
- Tracing paper is useful for transformations, use it if available.
- Show all construction lines. Do not rub any out.
- Don’t rush but use time carefully
- Use the mark scheme to inform your answers
- Check the units given in the question and in your answer
- Remember to use your calculator during the calculator paper.
- And the obvious – “dnt use txt or slng in xams coz xminrs nd 2 no what u r saing”.

When revising…………
- don’t leave your revision until the night before the examination
- create a revision timetable and stick to it
- study in a place where you can concentrate
- do lots of questions, especially past examination questions
- start revising by topics and nearer the examination mix up the questions
- focus on your weaker topics but revise others as well
- learn formula and facts off by heart, consider writing prompt sheets
- remember to use diagram, statement, working answer, units
- know which level and which paper the topics are aimed at
- consider using a revision workbook
- use online revision websites if you enjoy working in that way.

Some useful websites……
- www.mymaths.co.uk
- www.mrbartonmaths.com
- www.mathsbot.co.uk
- www.mathswatch.co.uk
Check you understand these key terms
  - Write down
  - Work out, solve or calculate
  - Estimate
  - Simplify or simplify fully
  - Factorise or factorise completely
  - Expand, expand and simplify or multiply out
  - Give reasons
  - Compare the two sets of data
  - Describe or describe fully
  - Sketch
  - Construct
  - Make an accurate drawing
  - Measure

This is not an exhaustive list of everything covered in the exam but here is a summary of the topics to be covered in this revision timetable

<table>
<thead>
<tr>
<th>Weeks to go until the exam</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>15.</td>
<td>Area and volume</td>
</tr>
<tr>
<td>14.</td>
<td>Angles</td>
</tr>
<tr>
<td>13.</td>
<td>Number</td>
</tr>
<tr>
<td>12.</td>
<td>Solving equations</td>
</tr>
<tr>
<td>11.</td>
<td>Statistical charts</td>
</tr>
<tr>
<td>10.</td>
<td>Completing linear tables and graphs</td>
</tr>
<tr>
<td>9.</td>
<td>Percentages, decimals and fractions</td>
</tr>
<tr>
<td>8.</td>
<td>Sequences and calculating the $n^{th}$ term</td>
</tr>
<tr>
<td>7.</td>
<td>Further algebra</td>
</tr>
<tr>
<td>6.</td>
<td>Probability</td>
</tr>
<tr>
<td>5.</td>
<td>Averages</td>
</tr>
<tr>
<td>4.</td>
<td>Naming shapes and constructions</td>
</tr>
<tr>
<td>3.</td>
<td>Two way tables and time tables</td>
</tr>
<tr>
<td>2.</td>
<td>Calculator and estimating</td>
</tr>
<tr>
<td>1.</td>
<td>Negative numbers</td>
</tr>
<tr>
<td>Weeks to go:</td>
<td>Topic:</td>
</tr>
<tr>
<td>-------------</td>
<td>--------</td>
</tr>
<tr>
<td>15</td>
<td></td>
</tr>
</tbody>
</table>

Can you...
- Can find the perimeter of a 2-D shape
- Can find the area of a 2-D shape by counting squares
- Can find the area of a rectangle
- Can find the area of a triangle
- Can find the area of a parallelogram
- Can find the area of a trapezium
- Can find the area of a compound shape
- Able to work out whether an expression or formula represents a length, area or volume
- Able to calculate circumference of a circle
- Able to calculate area of a circle
- Able to find perimeter and the area of shapes such as semicircles
- Able to find the volume of a 3-D shape by counting cubes
- Know the formula to find the volume of a cuboid
- Able to find the surface area of a cuboid
- Able to find the surface area and volume of a prism
- Able to find the volume of a cylinder
- Know how to find the density of a 3-D shape

**RAG**

**Own notes:**
Facts:
- Area of rectangle = \( lw \)
- Area of triangle = \( \frac{1}{2} bh \)
- Area of parallelogram = \( bh \)
- Area of trapezium = \( \frac{1}{2} \times (\text{sum of parallel sides}) \times \text{distance between them} \)
- Area of Circle = \( \pi r^2 \)
- Circumference of \( C = 2\pi r = \pi D \)
- Volume of cuboid = \( lwh \)
- Volume of cylinder = \( \pi r^2 h \)
- Density = \( \frac{\text{Mass}}{\text{Volume}} \)

Key Words:
- Perimeter, Area, Rectangle, Triangle, Parallelogram, Trapezium, Compound shape, Dimensions, \( \pi \) (\( \pi \)), Diameter, Radius, Vertical Height, Circumference, Prism, Cylinder, Cuboid, Cube, Surface Area

<table>
<thead>
<tr>
<th>Weeks to go:</th>
<th>Topic:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>14</strong></td>
<td><strong>Angles</strong></td>
</tr>
</tbody>
</table>

Can you...
- Measure and draw acute, obtuse and reflex angles
- Calculate angles on a straight line and angles at a point
- Calculate the size of angles in a triangle
- Calculate the sum of interior angles in a polygon
- Calculate the exterior angles and the interior angles of a regular polygon
- Calculate angles in parallel lines
- Use angle properties in special quadrilaterals
- Use a bearing to specify a direction

RAG

Own notes:
**Facts:**
- Sum of angles on a line = 180
- Sum of angles in a triangle = 180
- Sum of angles at a point = 360
- Sum of angles inside n-sided polygon is 180(n-2)
- Alternate Angles (parallel lines) are equal
- Corresponding Angles (parallel lines) are equal
- Interior + Exterior Angles add to 180

**Key Words:**
- Acute, Obtuse, Reflex, Straight line, Parallel Lines, Bearing, Interior and Exterior Angles, Polygon, Protractor, Angles at a point, Angles on a straight line, Equilateral Triangle, Isosceles Triangle, Quadrilateral, Alternate Angles, Corresponding Angles, Vertically Opposite Angles, Kite, Parallelogram, Rhombus, Trapezium

---

**Weeks to go:**
- **13**

**Topic:**
- **Number**

**Can you...**
- Find factors and multiples
- Write down simple squares, cubes and square roots
- Find a square root using a calculator
- Calculate simple powers of numbers
- Recognise 2-digit prime numbers
- Multiply and divide by powers of 10
- Multiply together multiples of 10
- Write numbers in prime factor form
- Work out the HCF and LCM of 2 numbers
- Simplify multiplication and division of powers

**RAG**

**Own notes:**
### Facts:

The first 10 prime numbers
2 3 5 7 11 13 17 19 23 29

The first 10 square numbers
1 4 9 16 25 36 49 64 81 100

The first 5 cube numbers
1 8 27 64 125

### Key Words:

Factor
Multiple
Prime number
Prime factor
Square
Cube
Square root
Lowest common multiple (LCM)
Highest common factor (HCF)

---

<table>
<thead>
<tr>
<th>Weeks to go:</th>
<th>Topic:</th>
<th>Solving Equations</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Can you...

- Solve equation such as $4x=12$
- Solve equation such as $3x+2=7$
- Solve equation such as $3x+7=x-6$
- Set up simple equations from given information
- Solve inequalities such as $3x+2<5$
- Solve equation such as $3(x-2) = 5x + 8$
- Solve equations by trial and improvement
- Rearrange simple formulas

### Own notes:

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<table>
<thead>
<tr>
<th>Facts:</th>
<th>Key Words:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Equation</td>
</tr>
<tr>
<td></td>
<td>Inequality</td>
</tr>
<tr>
<td></td>
<td>Rearrange</td>
</tr>
<tr>
<td>Weeks to go</td>
<td>Topic: Statistical Charts</td>
</tr>
<tr>
<td>-------------</td>
<td>---------------------------</td>
</tr>
</tbody>
</table>

**Can you...**
- draw and read information from pictograms, bar charts, dual bar charts and pictograms
- work out the total frequency from a frequency table and compare data in bar charts
- read and use two way tables to find probability and other mathematics
- read information from a stem and leaf diagram
- draw an ordered stem and leaf diagram
- interpret and draw a pie chart
- draw a line of best fit on a scatter diagram
- recognise the different types of correlation
- design a data collection sheet
- interpret a scatter diagram
- use the line of best fit to predict values
- design and criticise questions for questionnaires

**Draw and interpret line graphs**
**Interpret time series**
**draw and interpret frequency polygons**

**Facts:**
- Heights of bars represent frequency (total)
- Include a key
- Stem and leaf must be ordered and must have a key.
- Three main types of correlation
  - Positive, Negative and No correlation
- Questionnaire must not have leading questions,
  - Answers must not overlap
  - No personal questions

**Key Words:**
- Two way table,
- pictograms, bar charts, frequency diagrams,
- stem and leaf diagram, pie chart, scatter diagram, positive correlation, negative correlation,
- no correlation, line of best fit, questionnaires,
- survey, data collection sheet, frequency polygon axes

**RAG**

**Own notes:**
<table>
<thead>
<tr>
<th>Weeks to go:</th>
<th>Topic:</th>
<th>Linear Tables and Graphs</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td></td>
<td><strong>Can you...</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Read off values from a conversion graph</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Plot points in all four quadrants</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Read off distances and times from a travel graph</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Use a table of values to draw a linear graph</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Find an average speed from a travel graph</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Draw a linear graph without being given a table of values</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Find the gradient of a line</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Use “y=mx+c” to draw a line</td>
</tr>
<tr>
<td><strong>Facts:</strong></td>
<td></td>
<td><strong>Key Words:</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>The y axis points up to the sky</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“Along the corridor and up the stairs”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Average speed = distance ÷ time taken</td>
</tr>
<tr>
<td></td>
<td></td>
<td>In “y=mx+c” m represent the gradient and c represents the y-intercept</td>
</tr>
<tr>
<td><strong>RAG</strong></td>
<td></td>
<td><strong>Own notes:</strong></td>
</tr>
<tr>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Weeks to go:</th>
<th>Topic:</th>
<th>Percentages, Decimals and Fractions</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Can you…
- Change top-heavy fractions in to mixed numbers
- Change mixed numbers in to top-heavy fractions
- Work out a reciprocal
- Work out and recognise terminating and recurring decimals
- Add and subtract fractions
- Solve fraction problems expressed in words
- Compare fractions and decimals by using equivalence
- Multiply a fraction by a fraction
- Add and subtract mixed numbers
- Write a quantity as a fraction of another
- Find any percentage of a quantity
- Express one quantity as a percentage of another
- Find a percentage increase

Facts:
- \( \frac{1}{2} = 0.5 = 50\% \)
- \( \frac{1}{3} = 0.333\ldots = 33.333\ldots\% \)
- \( \frac{3}{10} = 0.3 = 30\% \)
- You can find equivalence between all fractions, percentages and decimals
- When adding, subtracting or comparing fractions, you need to first find the same denominator
- 115\% = 1.15 - This decimal can be used as a multiplier in calculations

Key Words:
Cancel, fraction, denominator, equivalent fraction, lowest common denominator, numerator, lowest terms, mixed number, top-heavy, proper fraction, rational number, reciprocal, recurring decimal, terminating decimal, decimal equivalents, multiplier

<table>
<thead>
<tr>
<th>Weeks to go:</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Topic:</td>
<td>Sequences and n\textsuperscript{th} term</td>
</tr>
</tbody>
</table>
### Can you...
- Find any term in a number sequence and recognise patterns
- Substitute numbers into an $n^{th}$ term rule
- Give the $n^{th}$ term of a linear sequence
- Know the $n^{th}$ term of a sequence of powers of 2 or 10
- Use sequences in pattern problems
- Recognise and use sequences of triangular, square and cube numbers, simple arithmetic progressions, Fibonacci type sequences, quadratic sequences, and simple geometric progressions

### Facts:
- First 5 powers of 2
  
  \[ 2, 4, 8, 16, 32 \]
- First 5 powers of 10
  
  \[ 10, 100, 1000, 10000, 100000 \]

### Key Words:
- Sequence
- $n^{th}$ term
- Power

### Weeks to go:
- 7

### Topic:
- Algebra continued
**Can you...**  
- Find the next term in a sequence and describe the pattern  
- Create terms of a sequence by substituting values in to \( n \)th term  
- Find the \( n \)th term of a sequence  
- Find \( n \)th term from practical problems  
- Draw quadratic graphs  
- Rearrange formulae

<table>
<thead>
<tr>
<th>RAG</th>
<th>Own notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Facts:**  
- most patterns you will come across will go up/down by the same amount  
- \( n \)th term is a formula that helps you find any term in a sequence  
- When working out \( n \)th term for a practical problem, write out the number sequence that you notice to help you  
- keep an eye out for 'special sequences'. These do not go up by the same amount. Some examples are triangular numbers, square numbers, cube numbers etc.  
- Quadratic graphs are not straight lines. You can normally recognise these as they will have an \( x^2 \) term in it.  
- When changing the subject formula, you want the subject by itself on one side of the equals sign. To do this, you solve the way you normally solve an equation - doing the same thing to both sides

**Key Words:**  
Pattern sequence, consecutive, difference, term, sequence, substitute, quadratic graph, quadratic equation, do the same to both sides expression, rearrange, subject, transpose, variable

---

**Weeks to go:**  
6

**Topic:**  
Probability
**Can you...**
- Use the probability scale and the basic language of probability
- Calculate simple probabilities based on outcomes
- Calculate probability event will not happen
- Calculate probability of two outcomes
- Calculate experimental probabilities and relative frequencies from experiment
- Complete and use sample space diagrams to find probabilities for combined events
- Predict the number of successful events using relative frequency

<table>
<thead>
<tr>
<th>RAG</th>
<th>Own notes:</th>
</tr>
</thead>
</table>

**Facts:**
- **Prob(event)** = \( \frac{\text{no of times event happens}}{\text{Total number of outcomes}} \)
- **Prob not happening** = 1 - **prob event happens**
- **Prob(A or B)** = **prob(A)** + **prob(B)**
- **Relative frequency** = \( \frac{\text{frequency of event}}{\text{Total number of trials}} \)

<table>
<thead>
<tr>
<th>Key Words:</th>
</tr>
</thead>
</table>
- Outcome, event, frequency, relative frequency, certain, impossible, likely, sample space diagram
- Probability - fraction or decimal between 0 and 1
- Pack of cards:
  - 52 cards
  - 4 suits (hearts, diamonds, spades, clubs)
  - 13 cards (Ace to King) in each suit

**Weeks to go:** 5  
**Topic:** Statistical Analysis
### Can you...

- Find the mode and median of a list of data
- Find the range of a set of data and find the mean of a small set of data
- Find the mean of and range from a stem and leaf diagram
- Find the mean from a frequency table of discrete data and draw a frequency polygon for discrete data
- Decide which is the better average to use for a set of data with reasons
- Find the median from a stem and leaf diagram
- Find an estimate of the mean from a grouped table of continuous data and draw a frequency polygon for continuous data

### Facts:

<table>
<thead>
<tr>
<th>Mean</th>
<th>Mode</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>add all together and divide by how many there are</td>
<td>most common</td>
<td>put in order and find the middle value</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If two numbers are in the middle find the middle of those two</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Highest take away the lowest</td>
</tr>
</tbody>
</table>

### Key Words:

- Mean
- Mode
- Median
- Range
- Stem and leaf
- Frequency
- Modal value
- Modal class
- Average
- Frequency table
- Grouped data
- Estimated mean

### Weeks to go:

4

### Topic:

Naming Shapes and Construction
<table>
<thead>
<tr>
<th>Can you...</th>
<th>RAG</th>
<th>Own notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- name and apply properties of special types of quadrilaterals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- name various 3D shapes and identify faces, vertices and edges</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- construct diagrams accurately using compasses, a protractor and a straight edge</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- construct line and angle bisectors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- draw loci of points moving according to a rule</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Facts:</th>
<th>Key Words:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- For properties of special quadrilaterals, read page 349</td>
<td>Quadrilateral, rectangle, square, kite, parallelogram, rhombus, trapezium, edge, face, vertex, angle, compasses, construct, side, angle bisector, bisect, line bisector, perpendicular bisector, loci, locus,</td>
</tr>
<tr>
<td>- Equal sides are shown using small lines; parallel sides are shown using arrows</td>
<td></td>
</tr>
<tr>
<td>- Link between vertices, faces, edges is Edges + 2 = Vertices + Faces</td>
<td></td>
</tr>
<tr>
<td>- Constructions will involve using a compass in all likelihood</td>
<td></td>
</tr>
<tr>
<td>- Think carefully when drawing loci; does it look right?</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Weeks to go:</th>
<th>Topic:</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Two Way Tables and Time</td>
</tr>
</tbody>
</table>
Can you...
- Read a two way table and use them to do probability
- Read off a two way table involving distances between places on a map
- Read information from a travel graph
- Find average speeds from a travel graph

<table>
<thead>
<tr>
<th></th>
<th>RAG</th>
<th>Own notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Facts:
Speed = distance \div time

Key Words:
Average, speed, distance-time, travel graph, two way table, probability

Weeks to go: 2
Topic: **Calculator and Estimating**
<table>
<thead>
<tr>
<th>Can you…</th>
<th>RAG</th>
<th>Own notes:</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Round off a number to significant figures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Approximate the result of a calculation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Round of an answer to a suitable number</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Make sensible estimates using measurements of length and weight</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Use a calculator to work out…</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Negative numbers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Powers of numbers and square roots</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Standard form</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Facts:</th>
<th>Key Words:</th>
</tr>
</thead>
<tbody>
<tr>
<td>When finding an estimate of a calculation always round the numbers off to 1 significant figure</td>
<td>Estimate, approximate, round, significant figure, decimal place, negative number, square root, power, standard form</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Weeks to go:</th>
<th>Topic:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Negative Numbers</td>
</tr>
<tr>
<td><strong>Can you...</strong></td>
<td><strong>RAG</strong></td>
</tr>
<tr>
<td>----------------</td>
<td>---------</td>
</tr>
</tbody>
</table>
| - Use negative numbers in everyday situations (e.g., temperature changes)  
- Add and subtract using positive and negative numbers  
- Multiply and divide negative numbers |         |                |

| **Facts:**  
Multiplying two negative numbers gives a positive answer. The same is true with division, e.g.  
-  \(-2 \times -5 = 10\)  
-  \(-12 \div -6 = 2\)  
Adding a negative number is the same as taking it away, e.g.  
-  \(5 - (-3) = 5 - 3 = 2\) | **Key Words:**  
Negative, Positive, Temperature, number line, greater than, less than, difference |