EXAM CHANGES 2022

GCSE Statistics Exam Board: AQA

SUMMARY OF ADAPTATIONS

- A list of topics has been published for each paper.

HOW THE SCHOOL IS USING THIS INFORMATION

- Practice and mock exams will be adapted to reflect summer 2022 exams.
- Intervention sessions will focus on the topics for each paper.
- Revision plan to focus on advance information.
- Lesson starters will focus on key formulae that needs to be learnt.
- Students will have a copy of the topic list in their exercise books.
- Included topics will be highlighted in revision guides and workbooks.
- Revision will be focussed on specific topics for each paper.

WHAT STUDENTS SHOULD DO

- Ensure that they learn and know how to use key formulae
- Use the list of topics for each paper to identify areas of strength and weakness.
- Follow the revision plan – completing each revision homework.
- Revise the areas identified as an area of weakness – but do not neglect revising topics that are a strength. These are where most marks will be picked up.
- Attend Period 6 Statistics support after school every other Thursday. Teachers will be delivering specific topics focussed on the GCSE exam. They are also willing to support students with any individual queries for other topics.

FORMULAE THAT MUST BE LEARNT

Formula required
In order to carry out stratification, calculating the percentage or proportion of an amount: $\frac{x}{100}$ × amount
Calculating the angle for a sector in a pie chart: $\frac{x}{\text{total}}$ × 360
Calculation of arithmetic mean: $\bar{x} = \frac{\Sigma fx}{\Sigma f}$
Range = highest value – lowest value
Interquartile range (IQR) = upper quartile – lower quartile
Probability = $\frac{\text{Number of favourable outcomes}}{\text{Total number of outcomes}}$
4 point moving average = $\frac{x_1 + x_2 + x_3 + x_4}{4}$
Calculate double mean point ($\bar{x}, \bar{y}$): $\bar{x} = \frac{\Sigma fx}{\Sigma f}$, $\bar{y} = \frac{\Sigma fy}{\Sigma f}$
Formulae for independent events: P(A and B) = P(A) × P(B) P(A | B) = P(A) P(B | A) =P(B)
Formula for conditional probability $P(B \mid A) = \frac{P(A \text{ and } B)}{P(A)}$
Index number = $\frac{\text{current value of item}}{\text{value in base year}}$ × 100

Formula that students should be able to use, but need not memorise. These can be given in the assessment, either in the appropriate question, or in a list from which students select and apply as appropriate.

Formula required
Rates of change (eg Birth rate = $\frac{\text{number of births} \times 1000}{\text{total population}}$)

STATISTICS FOUNDATION PAPER 1 – TOPIC LIST

SELECTION AND COLLECTION OF DATA
Hypothesis
Types of data
Primary and secondary data
Data Source
Random sample
Collected data
Processing data
Reliability
PRESENTATIONS AND THEIR INTERPRETATION
Pictogram
Tally chart
Choropleth
Population pyramid
Scatter diagram
Bar chart
Percentage composite bar chart
Appropriate diagram
Criticise diagram
Secondary data table
Interpret graph
CALCULATION AND INTRPRETATION OF MEASURES
Skew
Trends
Moving average
Birth rate
Consumer price index
Index number
Causation
PROBABILITY
Simple probability
Risk
Independent events
Two-way table

STATISTICS FOUNDATION PAPER 2 – TOPIC LIST

SELECTION AND COLLECTION OF DATA
Hypothesis
Validity
Data collection
Opportunity sampling
Random sampling
Question design
PRESENTATIONS AND THEIR INTERPRETATION
Venn Diagram
Pie chart
Stem and leaf
Choropleth
Line graph
Scatter graph
Bar chart
Cumulative frequency diagram
Box plot
Dual bar chart
Appropriate diagram
Criticise diagram
Line of best fit
Secondary data table
Interpret graph
CALCULATION AND INTRPRETATION OF MEASURES
Median from diagram
Measures of average
Cumulative frequency
Lower and upper quartile
Lower quartile
Range
Percentage
Rate calculation
Extrapolation
Causation
PROBABILITY
Simple probability
Venn diagram
Estimate population characteristics