

discreteGraph

1. interpret bar or line graph - only frequencies which can be read off axis labels
2. complete bar or line graph - only frequencies which are labelled on axis
3. interpret bar or line graph - frequencies are between labels
4. complete bar or line graph - frequencies are between labels on axis
5. interpret bar or line graph - must find the frequency total
6. given dual column table or side-by-side or back-to-back bar (i) complete and/or (ii) interpret e.g. how many A or how many more/fewer A than B or which category has the same/a given frequency
8. state what is wrong with a given graph e.g. missing title on axes, missing or wrong values on an axis, missing key etc.

frequencyTable

3. complete tally and frequency table
4. interpret 2 way table - find probability {individual cell}
5. interpret 2 way table - find probability {sum of row or column}
7. complete frequency tree {each data value given is for only one cell}
8. complete frequency tree {one data item is sum of two cells}
9. complete 2 way entry table
10. complete frequency tree or 2 way entry table and then answer a probability question {not conditional}
11. word problem which is easy to solve by drawing a 2 way entry table or frequency tree

groupedGraph

1. draw a frequency polygon given a (grouped data) frequency table

MMMRQgrouped

1. from line graph or bar chart or table or pictogram or pie chart state the mode
2. **scaffold to** state median and mode or range given frequency table {of discrete numerical data} **scaffold is** encouraged to write out all data values
3. state median and mode or range given frequency table {of discrete numerical data}
4. **scaffold to** state mean given frequency table {of discrete numerical data} **scaffold is** extra columns to calculate sub total
5. state mean given frequency table {of discrete numerical data}
6. estimate mean given frequency table {of continuous data}

MMMRQseparate

2. state mode or modes of unordered data items
3. state median of {odd number} of unordered data items
5. state range of unordered data items
7. state median {even number} of unordered data items
9. state mean of unordered data items
11. complete 5 fig summary and work out range and IQR {ordered data}
12. complete 5 fig summary and work out range and IQR {un-ordered data}

probabilitySingle

1. **scaffold to** label probability line with decimals, percentages and fractions **scaffold is** some labels are given
2. write down probability of single event **easier** because diagram shows all possible outcomes
3. write down probability of single event **harder** because no diagram
4. **scaffold to** show probability of single event on probability line **scaffold is** given suitable but incomplete fraction labels {diagram for all experiments except regular dice}
5. write down probability of **not** an event {no diagram}
6. state probability of event in words {which is possible to calculate numerically} using only: impossible, likely, evens, likely or certain
7. show probability of single event on probability line
8. state probability of event in words {using general knowledge} using only: impossible, likely, evens, likely, certain
9. which is best estimate of probability {different number of trials} and explain why
11. write down probability of **not** a single event {probability is e.g. 0.3}
13. find missing probability given incomplete table of probabilities
14. estimate {expected value} given incomplete table of probabilities and number of trials

probabilityTree

1. systematic list all possible outcomes e.g. 3 starters and 2 mains
2. **scaffold to** calculate combined probability of 2 independent events **scaffold is** given a 2 way entry table labelled with outcomes of each event
5. find a probability of 2 independent events given tree and probabilities on all branches
6. given information about 2 independent events **either** complete an incomplete tree and give probability of one outcome **or** state the errors in an incorrectly labelled tree

proportionalGraph

2. interpret pictogram - only whole number of pictogram symbol
3. complete pictogram - only whole number of pictogram symbol {complete tally first for some questions}
5. interpret pictogram with $\frac{1}{2}$ and $\frac{1}{4}$ symbols {questions may also include finding total or back to back}
7. complete pictogram where $\frac{1}{2}$ and/or $\frac{1}{4}$ symbols are required

scatter

2. complete and interpret scatter: plot two extra points {easy scale} and state what kind of correlation shown
3. interpret scatter {easy scale} estimate value {expected to draw and use line of best fit}

stemLeaf

1. **scaffold to** interpret a stem and leaf diagram: write out all data long-windedly {data only TU} **scaffold is** given reminder and grid to write values in
2. **scaffold to** draw stem and leaf diagram {data only TU} **scaffold is** given first few items placed into rough stem and leaf
3. **scaffold to** draw stem and leaf diagram {data only TU} **scaffold is** given rough and neat grid and reminded to write a key
5. interpret/draw a stem and leaf diagram, find: median {odd number of items}, mode, probability less or greater than a value, range {data only TU}
6. interpret a stem and leaf diagram, find: median, mode, probability less or greater than a value, range {harder key e.g. $2|5 = 250$ or 2.5 }
7. draw and interpret stem and leaf diagram find: median, mode, probability less or greater than a value, range {harder key e.g. $2|5 = 250$ or 2.5 }
9. interpret stem and leaf diagram find: interquartile range, median, mode, probability less or greater than a value, range {harder key e.g. $2|5 = 250$ or 2.5 }

Venn

2. complete e.g. ξ or A or $B = \{\text{a list of all elements}\}$
3. complete e.g. A' or $B' = \{\text{a list of all elements}\}$ or spot the errors given a complete 2 loop Venn diagram
4. complete $A \cap B = \{\text{a list of all elements}\}$ or spot the errors
7. complete Venn diagram when $A = \{\text{given}\}$, $B = \{\text{given}\}$ and $\xi = \{\text{given}\}$
10. find probability $\{\text{simple not conditional}\}$ from Venn diagram
11. solve word problem using Venn diagram and clues
12. complete Venn diagram given clues involving $A \cap B$ and /or $A \cup B$
13. complete Venn diagram when e.g. $A = \{\text{multiples of 3}\}$ and $B = \{\text{factors of 12}\}$