Significantly Above	Above	At	Below	Significantly below
Discusses the answer to "what is the probability of getting five 6's" in relation to conditional probability.	Answers the question "what is the probability of getting five 6's?" and can discuss the solution	Answers the question "What is the probability of getting five 6's?" using a diagram	Answers the question "What is the probability of getting 3 sixes with one dice?"	Answers the question "What is the probability of getting a 6 when rolling a dice?"
Solves the larger problem without needing a smaller problem.	Quickly moves from a smaller problem to solve the larger problem	Identifies a smaller problem to start with, builds on this problem	Identifies a smaller problem to solve	Is given (or needs assistance to find) the smaller problem to solve
Explains the "proof" of the solution	Records thinking in a logical manner	Keeps records of thinking which can be easily followed by another	Needs to explain their record keeping to another	Has difficulty in keeping records to explain their thinking
Explains the calculations used to determine the probability of a "Yahtzee". Makes generalisations relating to aspects of the game	Justifies the solution given and generalises in the context of the game	Explains and justifies the solution based on the diagram used	Explains how the solution was determined	Has difficulty in explaining the solution
Solves the problem with calculations, without needing a diagram.	Accurately uses tree diagram or another suitable method to solve the problem	Accurately draws and uses a tree diagram to represent the problem	After prompting uses a tree diagram to represent the problem	Needs assistance to create and use a tree diagram to solve the problem
Uses the language of chance to make generalisations based on the problem, including conditional, dependent and independent events	Uses the language of chance in discussing the problem. Explains the difference between "and" and "or"	Uses the language of chance correctly and in context to describe the problem. Uses "and" and "or" to calculate probabilities.	Uses the language of chance to describe outcomes	Uses some language of chance to describe outcomes
Shows understanding of symbolic probability notation when recording and discussing the solution	Writes the probabilities using generalised symbolic notation e.g. Pr(X) =A∩B, Pr=A∪B	Writes the probabilities using some symbolic notation	Writes the probabilities using fractions and calculations, in sentence form	Writes the probabilities in words
Lists all outcomes of any experiment and assigns probabilities to each.	Lists all outcomes of a three-step experiment and assigns probabilities to each	Lists all outcomes of a two-step experiment and assigns probabilities to each	Lists all outcomes of a two-step experiment and assigns probabilities to some of them	Lists some outcomes of a two-step experiment, needs support to find all outcomes.

Achievement Grade	Achievement Performance Description
A **Comprehensively working at or above Year 9 level**	• Discusses the answer to "what is the probability of getting five 6's" in relation to conditional probability. • Solves the larger problem without needing a smaller problem. • Explains the "proof" of the solution • Explains the calculations used to determine the probability of a "Yahtzee". Makes generalisations relating to aspects of the game • Solves the problem with calculations, without needing a diagram. • Uses the language of chance to make generalisations based on the problem, including conditional, dependent and independent events • Shows understanding of symbolic probability notation when recording and discussing the solution • Lists all outcomes of any experiment and assigns probabilities to each.
B **Thoroughly working at Year 9 level**	• Answers the question "what is the probability of getting five 6's?" and can discuss the solution • Quickly moves from a smaller problem to solve the larger problem • Records thinking in a logical manner • Justifies the solution given and generalises in the context of the game • Accurately uses tree diagram or another suitable method to solve the problem • Uses the language of chance in discussing the problem. • Explains the difference between "and" and "or" • Writes the probabilities using generalised symbolic notation e.g. Pr =A∩B, Pr=A∪B • Lists all outcomes of a three-step experiment and assigns probabilities to each
C **Satisfactorily working at Year 9 level**	• Answers the question "What is the probability of getting five 6's?", using a diagram • Identifies a smaller problem to start with, builds on this problem • Keeps records of thinking which can be easily followed by another • Explains and justifies the solution based on the diagram used • Accurately draws and uses a tree diagram to represent the problem • Uses the language of chance correctly and in context to describe the problem. • Uses "and" and "or" to calculate probabilities. • Writes the probabilities using some symbolic notation • Lists all outcomes of a two-step experiment and assigns probabilities to each
D **Working at basic Year 9 level, sometimes with support.**	• Answer the question "What is the probability of getting 3 sixes with one dice?" • Identifies a smaller problem to solve • Needs to explain their record keeping to another • Explains how the solution was determined • After prompting uses a tree diagram to represent the problem • Uses the language of chance to describe outcomes • Writes the probabilities using fractions and calculations, in sentence form • Lists all outcomes of a two-step experiment and assigns probabilities to some of them
E **Experiencing difficulty/working with support at or below Year 9 level**	• Answers the question "What is the probability of getting a 6 when rolling a dice?" • Is given (or needs assistance to find) the smaller problem to solve • Has difficulty in keeping records to explain their thinking • Has difficulty in explaining the solution • Needs assistance to create and use a tree diagram to solve the problem • Uses some language of chance to describe outcomes • Writes the probabilities in words • Lists some outcomes of a two-step experiment, needs support to find all outcomes.