Kemnal Technology College

Year 7 – Term 2 – Kemnal Keys

ambitious minds

Unit 2: Probability	Unit 3: Expressions, Functions and Formulae
• **Probability** is the chance that something will happen. In probability, an **event** is something that might happen. • You can show a probability on a **probability scale**. • All probabilities have a value between 0 and 1. • You can use fractions, decimals and percentages to describe probabilities. • An impossible event has the probability of 0 or 0%. • A certain event has the probability of 1 or 100%.	• You must use the priority of operations to do calculations. Use **BIDMAS**: **B**rackets, **I**ndices (powers), **D**ivision and **M**ultiplication, **A**ddition and **S**ubtraction. • When you have only x and ÷, or only + and -, then work from left to right. • A **function** is a relationship between two sets of numbers. • The numbers that go into a function machine are called the **inputs**. • The numbers that come out are called the **outputs**
• **Outcomes** are all the possible results of an event. The possible outcomes of flipping a coin are 'heads' or 'tails'. • **Successful outcomes** are the outcomes you want. • Probability of an event happening= $\frac{\text{number of successful outcomes}}{\text{total number of possible outcomes}}$. • Picking an item **at random** means that each item has exactly the same chance of being picked.	• In maths, if you do not know a value, you can use a letter to represent it. This is called a **variable**. • An expression contains terms using numbers and letters. **Terms**: $2m$ $13x$ y 7 **Expressions**: $2m + 7$ $3x + 2$ • **Like terms** contain the same letter (or contain no letter).
• P(Green or Blue) means 'the probability of landing on green or blue'. • P(Event not happening) = 1 – P(Event happening).	• When you multiply out a bracket, multiply every number inside the bracket by the number outside the bracket.
• You can use the results of an **experiment** to estimate probabilities. This is called **experimental probability**. • Experimental probability = $\frac{\text{frequency of event}}{\text{total frequency}}$. • Probability can be used to **predict** what may happen in the future. • The more times you repeat an experiment, the more accurate the experimental probability.	• **Expanding** removes brackets from an expression. **Factorising** inserts brackets into an expression. • An **equation** contains an unknown number (a letter) and an '=' sign. **Solve** an equation means work out the value of the unknown number. The **solution** is the value of the unknown.
• You can use probability to estimate the **expected number** of times an outcome will occur.	• A **formula** shows the relationship between different variables, written as words or letters. You can use a formula to work out an unknown value by **substituting** the values that you do know into the formula.

Quiz Time

Week 1 Quiz

1. What is probability?
2. What is the value of an impossible event?
3. A certain event has a value of _____.
4. All probabilities have a value between ____ and ___.
5. Which probability word has a value between 0% and 50%?

Week 2 Quiz

1. In probability, what is an event?
2. _____ are all the possible results of an event.
3. What is a probability scale used for?
4. Picking an item at random, means that _____.
5. Probability of an event = $\frac{\_\_\_\_\_}{\text{total number of outcomes}}$.

Week 3 Quiz

1. You can use _____, _____, and _____ to describe probabilities.
2. Successful outcomes are the outcomes you _____.
3. What can you use to estimate probabilities?
4. P(Green or Blue) means?
5. What is a function?

Week 4 Quiz

1. What can you use to predict what may happen in the future?
2. How can you use P(Not Happening), to work out P(Happening)?
3. What are inputs?
4. The numbers hat come out of function machines are called _____.
5. What is a variable, and what do you use it for?

Week 5 Quiz

1. How do you multiply out a bracket?
2. Like terms contain the same _____.
3. What makes an equation different to an expression?
4. How is a term and expression different?
5. What is meant by a solution?

Week 6 Quiz

1. Expanding _____ brackets from an expression.
2. What does factorising mean?
3. A formula shows the relationship between _____.
4. What is means by substitution?
5. The more times you repeat an experiment, the more _____ the experimental probability.