



Year 8 - Term 1 - Kemnal Keys



Unit 1: Surface Area and Volume	Unit 2: Decimals and Number Properties	Unit 3: Expressions
<ul style="list-style-type: none"> A 3D solid has faces, edges and vertices. Faces and edges can be flat or curved. A net is a 2D shape that folds to make a 3D shape. 	<ul style="list-style-type: none"> A multiple of a number is in that number's multiplication table. A factor is a whole number that will divide exactly into another number. A prime number has exactly two factors, 1 and itself. 	<ul style="list-style-type: none"> You write an algebraic expression by using letters to stand for numbers. The letter is called a variable because its value can change or vary.
<ul style="list-style-type: none"> The plan is the view from above the object. The front elevation is the view of the front of the object. The side elevation is the view of the side of the object. 	<ul style="list-style-type: none"> To find the square of a number, you multiply it by itself. Finding the square root is the inverse of squaring. 	<ul style="list-style-type: none"> In index notation, the number that is being multiplied is called the base. The number written above the base is called the index or the power. The index tells you the number of times that the base must be multiplied by itself.
<ul style="list-style-type: none"> The Surface Area of a 3D solid is the total area of all its faces. The volume of a 3D solid is the amount of 3D space it takes up. The units of volume are cubic units (e.g. mm^3, cm^3, or m^3). Volume of a cube = side length x side length x side length. Volume of a cuboid = length x width x height. 	<ul style="list-style-type: none"> Prime factors are factors that are prime numbers. <ul style="list-style-type: none"> The factors of 36 are 1, 2, 3, 4, 6, 9, 12, 18, and 36. The prime factors are 2 and 3. All positive integers can be written as a product of prime factors. This is called prime factor decomposition. The product is often written in index form (numbers with powers). You can use prime factors decomposition to find the highest common factor (HCF) or lowest common multiple (LCM) of two or more numbers. 	<ul style="list-style-type: none"> When multiplying numbers or variables with the same bases, we add the indices. When dividing numbers or variables with the same bases, we subtract the indices. A number written in front of a variable, is called a coefficient. A coefficient tells you how many of the same variable you have. Variables can be added or subtracted to or from one another, by adding or subtracting the coefficient.

Quiz Time

Week 1 Quiz

1. What are the four transformations?
2. What is meant by vertices?
3. Nets are used to _____.
4. Define the term front elevation.
5. What is surface area of a 3D shape?

Week 2 Quiz

1. What units are used for volume?
2. What is the plan of a 3D shape?
3. What a multiple of a number?
4. How do you calculate the volume of a cube?
5. What do you need to carry out a reflection?

Week 3 Quiz

1. What is a factor of a number?
2. What is the inverse of squaring a number?
3. Define the term side elevation.
4. How do you find the square of a number?
5. Are the faces of a 3D object flat, curved or either?

Week 4 Quiz

1. Define prime factor.
2. What is writing an integer as a product of its prime factors is called?
3. What is index form?
4. What is the HCF of two numbers?
5. What does the volume of a cuboid equal?

Week 5 Quiz

1. In index notation, the number above the base is called the _____.
2. What are the prime factors of 36?
3. How do you multiply variables with the same bases?
4. Why is a letter in an algebraic expression called a variable?
5. What is the inverse of a square root of a number?

Week 6 Quiz

1. What is a coefficient?
2. How do you add variables to each other?
3. When dividing numbers with the same bases, we _____ the indices.
4. What is the LCM of two numbers?
5. What are the factors of 36?