Year 7 Unit 1 Overview-Number skills:

Test window: 7th November 2019 - 18th November 2019

Target grade for tests:

You will learn about:

- Numbers and the number system.
- Addition and Subtraction.
- Multiplication and Division calculations.

You will be able to:

- Multiply and divide numbers by 10, 100 and 1000 giving answers up to 3 decimal places.
- Read, write, order and compare numbers up to 10,000,000 and determine the value of each digit.
- Use negative numbers in context, and calculate intervals across zero.
- Identify common factors, common multiples and prime numbers.
- Perform mental calculations, including with mixed operations and large numbers.
- Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use .
- Multiply numbers up to 4 digits by a two-digit whole number using the formal written method of multiplication.
- Solve problems involving addition, subtraction and multiplication.
- Use your knowledge of the order of operations to carry out calculations.
- Divide numbers up to 4 digits by a two-digit whole number using the formal written method of division; interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context.
- Communicate your methods verbally, using a range of mathematical vocabulary.
- Structure your methods showing clear steps of workings.
- Apply your skills to solve a variety of problems in real-life contexts.

Lesson Overview	Key Words
NUMBERS AND THE NUMBER SYSTEM - Understand place value in numbers with up to three decimal places - Multiply whole numbers by 10 (100, 1000) - Divide whole numbers by 10 (100, 1000) when the answer is a whole number - Multiply (divide) numbers with up to three decimal places by 10 (100, 1000) - Understand (order, write, read) place value in numbers with up to eight digits - Understand and use negative numbers when working with temperature - Understand and use negative numbers when working in other contexts - Know the meaning of a common multiple (factor) of two numbers - Identify common multiples (factors) of two numbers - Know how to test if a number up to 120 is prime **CALCULATING** - Multiply a two-digit number by a single-digit number mentally - Add a three-digit number to a two-digit number mentally - Multiply a four-digit number by a two-digit number - Solve multi-step problems involving addition, subtraction and/or multiplication - Know that addition and subtraction have equal priority - Know that multiplication and division have equal priority - Know that multiplication and division take priority over addition and subtraction - Use short division to divide a four-digit number by a one-digit number - Use short division to divide a three- (or four-) digit number by a two-digit	**Refer to http://studymaths.co.uk/glossary.php for definitions of the key words** Place value Digit Negative number (Common) multiple (Common) factor Divisible Prime number, Composite number Addition Subtraction Sum, Total Difference, Minus, Less Column addition Column subtraction Operation Multiply, Multiplication, Times, Product Commutative Factor Short multiplication Long multiplication Divide, Division Divisor, Dividend, Quotient, Remainder Short division Long division Remainder Approximate (noun and verb) Estimate (noun and verb) Round Decimal place Check Solution Answer

number
- Understand the method of long division
- Use long division to find the remainder at each step of the division
- Know how to write, and use, the remainder at each step of the division
- Use long division to divide a three- (or four-) digit number by a two-digit number
- Write the remainder to a division problem as a remainder
- Write the remainder to a division problem as a fraction
- Extend beyond the decimal point to write the remainder as a decimal
- Identify when division is needed to solve a problem
- Extract the correct information from a problem and set up a written division calculation
- Interpret a remainder when carrying out division

Order of magnitude
Accurate
Accuracy

Notation
Remainders are often abbreviated to 'r' or 'rem'
The approximately equal symbol ($\approx$)

Research	
Note-making	
Group work & discussion	
Memorisation	
Precision & accuracy	
Independence	
Reflection	

Suggested reading or support/ challenge available

Support is available from a Maths teacher in '*MORALE*' in M1 daily from 1:30pm -1:45pm

www.mymaths.co.uk

login: **penryn**

password: **octagon**

www.hegartymaths.com
Go to student login at the top… find your school, enter your details and then set up your password…

https://vle.mathswatch.com/vle/

login: school username followed by **@penryn-college**

password: **Penryn2016**

Use your revision guide

Use the code in the front of your guide to access your free online revision

www.justmaths.co.uk/online

login: **PenrynStudent**

password: **Penryn**

Cross curricular
SMSC:
1.1 Exploring, understanding and respecting cultural diversity e.g. exploration of different methods of multiplication (Chinese, Russian).
3.1 Developing personal qualities and using social skills (regular paired/ group work communication).
3.2 Participating, cooperating and resolving conflicts (paired/group activities).
4.2 Experiencing fascination, awe and wonder of mathematics.
4.4 Using imagination and creativity in learning.
Literacy: Verbal communication of understanding using key words in the correct context. Development of written communication of methods and strategies to problem solve.
NAC:
Science – Read and write numbers in figures and words. Recognise and use decimals and negative numbers. Estimation. Mental and written calculations. Round whole numbers and decimals. Know the multiplication tables and associated division facts. Multiply and divide by 10 and 100 and 1000.
Technology- Read and write numbers in figures and words. Know the multiplication tables and associated division facts. Mental and written calculations. Multiply and divide by 10 and 100 and 1000.
Creative Arts – Read and write numbers in figures and words.
MFL – Recognise and use decimals. Mental and written calculations.
RE - Read and write numbers in figures and words. Estimation.
PE - Know the multiplication tables and associated division facts. Multiplication and division calculations.
Geography - Read and write numbers in figures and words. Mental and written calculations. Know the multiplication tables and associated division facts.
History - Mental addition and subtraction.