Calday Grange Grammar School

YEAR 7 TOPIC 1: Calculations and Rounding

Calday Maths Department

This topic is important because:
Multiplying and dividing using integers and decimals is required as a basis for all non-calculator methods. Rounding is necessary for estimation and in all areas of maths, solutions will need to be given to an appropriate degree of accuracy.

KEY SKILLS: Number

HPL FRAMEWORK:

Automaticity, Precision, Speed and Accuracy

ASSESSMENT:

Timing: 6 lessons approximately

Test:	CCT1	topics 1 – 2, non-calculator
	CCT2	topics 1 – 6, non-calculator
	Exam	topics 1 – 14
Homework:		weekly MathsWatch

CURRICULUM ENHANCEMENT and REVISION:

MyMaths links:
1001 1002 1004 1008 1010 1011 1013 1382 1923
MathsWatch links:
N27a N27b N28a N28b N29a N29b N15a N15b N16
Google Drive: CCT revision folder

CORE KNOWLEDGE & KEY CONCEPTS:

Round numbers to a given number of decimal places appropriately, to one significant figure for estimating and truncation.
Multiply and divide using powers of and multiples of 10.
Multiply a three-digit by a two-digit number using long multiplication including decimals.
Divide using either short or long division including by decimals.
Check whether an answer is reasonable by estimation and other methods.
Use a calculator effectively, including use of the ANS, SD, fraction, and power buttons.

GREATER DEPTH:

1) Round numbers to a given number of significant figures

KEY VOCABULARY/TERMS:

Integer	Bus stop method	Column method
Decimal places	Place value	Remainder
Estimation	Truncation	Significant figures

PRIOR LEARNING

NEXT LEARNING

Y7 Topic 2 Integers and Decimals
Y8 Topic 1 Calculating
Y8 Topic 9 Rounding
Y9 Topic 2 Standard Form

CROSS CURRICULAR LINKS:

Text Resources:

7C Pages 4,13,100,107,109,111
7+ Pages 20,22,26,29,82,92-99
8+ Pages 24,26,29,76,79

DEVELOPING TOMORROW'S LEADERS

Calday Grange Grammar School

YEAR 8 TOPIC 1: Calculating with Numbers

Calday Maths Department

This topic is important because:
Working with numbers is required as a basis for all areas of maths. Fluency in all types of calculation allows us to reach an answer efficiently and effectively.

KEY SKILLS: Number

HPL FRAMEWORK:

Precision, Automaticity, Speed and Accuracy

ASSESSMENT:

Timing: 8 lessons approximately

Test:	CCT1	topics 1 – 3, non-calculator
	CCT2	topics 1 – 5, non-calculator
	Exam	topics 1 – 18
Homework:		weekly MathsWatch

CURRICULUM ENHANCEMENT and REVISION:

MyMaths links:
1017 1047 1040 1016 1007 1010 1011 1008 1018 1019 1042 1046 1074 1842 1768 1769 1041 1916 1917 1905 1911 1914 1904

MathsWatch links:
N13 N14 N15 N16 N22 N23 N28 N29 N34 N35 N36 N37 N40 N41 N42 17 18 19 20 24 25 26 66 67 70 71 72 73 74 84 85

Google Drive: CCT revision folder

CORE KNOWLEDGE & KEY CONCEPTS:

Review multiplication and division methods.
Review adding, subtracting, multiplying and dividing using fractions, including mixed numbers.
Review adding, subtracting, multiplying and dividing using decimals, including mental methods and column methods.
Review adding, subtracting, multiplying and dividing from worded problems.
Review using a calculator effectively, including use of the ANS, SD, fraction, buttons.

KEY VOCABULARY/TERMS:

Integer	Decimal place	Place value
Bus stop method	Column method	Remainder
Equivalent	Recurring decimal	Terminating decimal
Numerator	Denominator	Mixed number
Improper fraction	Simplify	Evaluate

PRIOR LEARNING

Y7 Topic 1 Calculations
Y7 Topic 5 Fractions, Decimals and %

NEXT LEARNING

Y8 Topic 6 Percentages
Y8 Topic 14 Factors and Multiples
Y9 Topic 1 Calculations

CROSS CURRICULAR LINKS:

DEVELOPING TOMORROW`S LEADERS

Calday Grange Grammar School

YEAR 9 TOPIC 1: Calculations

Calday Maths Department

This topic is important because:
Working with numbers is required as a basis for all areas of maths. Fluency in all types of calculation allows us to reach an answer efficiently and effectively.

KEY SKILLS: Number

HPL FRAMEWORK:

Precision, Automaticity, Speed and Accuracy

ASSESSMENT:

Timing: 5 lessons approximately

Test:	CCT1	topics 1 – 2, non-calculator
	CCT2	topics 1 – 4, non-calculator
	Exam	topics 1 – 12
Homework:		weekly MathsWatch

CURRICULUM ENHANCEMENT and REVISION:

MyMaths links:
1017 1019 1040 1046 1047 1068 1069 1072 1167 1393 1916 1917 1007 1008 1010 1011 1923
MathsWatch links:
N13 N15 N16 N19 N20 N28 N29 N40 17 18 19 20 22 23 66 67 68 75
Google Drive: CCT revision folder

CORE KNOWLEDGE & KEY CONCEPTS:

Review of the basics of fractions; adding, subtraction, multiplying and dividing, with and without a calculator.
Review adding, subtracting, multiplying and dividing whole numbers, integers (including negatives) and decimals.
Review use of BIDMAS including use of the calculator to evaluate multiple stage calculations.
Review using the ANS, SD, power and fraction buttons on the calculator.

KEY VOCABULARY/TERMS:

Integer	Decimal place	Place value
Bus stop method	Column method	Remainder
Equivalent	Recurring decimal	Terminating decimal
Numerator	Denominator	Mixed number
Improper fraction	Simplify	Evaluate
Integer	BIDMAS	Order of operations

PRIOR LEARNING

Y8 Topic 1 Calculating with Numbers
Y8 Topic 2 Integers

NEXT LEARNING

Y9 Topic 2 Standard Form
Y9 Topic 4 Rounding
Y9 Topic 6 Decimals, Fractions and %

CROSS CURRICULAR LINKS:

DEVELOPING TOMORROW`S LEADERS

Calday Grange Grammar School

YEAR 10 TOPIC 1: Percentages

Calday Maths Department

This topic is important because:
Percentages are used in many areas of real life. They allow us to compare amounts and proportions given in different forms and we can calculate how numbers change.

KEY SKILLS: Number

HPL FRAMEWORK:

Seeing Alternate Perspectives, Complex and Multi-Step Problem Solving, Speed and Accuracy

ASSESSMENT:

Timing: 7 lessons approximately

Test: CCT1 topics 1 – 2, non-calculator
CCT2 topics 1 – 4, calculator
Exam topics 1 – 14
Y11 mock

Homework: weekly MathsWatch

CURRICULUM ENHANCEMENT and REVISION:

MyMaths links:
1030 1031 1060 1073 1237 1238 1239 1302 1934 1962 1963
MathsWatch links:
40 108 109 110 111 164
Google Drive: CCT revision folder

CORE KNOWLEDGE & KEY CONCEPTS:

Review of calculating a percentage increase or decrease with and without a calculator.
Review solving problems involving percentage change including compound interest and depreciation, repeated calculations, simple interest.
Solve problems where the rate of increase is the unknown quantity.
Calculate the original quantity given a percentage increase or decrease and a repeated percentage change.
Find the percentage change given the original and final amount.

GREATER DEPTH:

1) Use iteration for repeated percentage change.

KEY VOCABULARY/TERMS:

Percentage change	Percentage increase	Percentage decrease
Simple interest	Compound interest	Depreciation
Multiplier	Reverse percentage	Profit

PRIOR LEARNING

Y9 Topic 6 Fractions, Decimals and %

NEXT LEARNING

Y10 Topic 12 Number Review
Y11 Topic 12 Iteration

CROSS CURRICULAR LINKS:

DEVELOPING TOMORROW'S LEADERS

Calday Grange Grammar School

YEAR 11 TOPIC 1: Circle Theorems

Calday Maths Department

This topic is important because:
Circle theorems allow us to strategically plan an approach to solving complex and multi-step problems using both new and prior knowledge.

KEY SKILLS: Geometry and Measures

HPL FRAMEWORK:

Complex and Multi-Step Problem Solving, Strategy Planning, Connection Finding

ASSESSMENT:

Timing: 6 lessons approximately

Test: CCT1 topics 1 – 3, non-calculator
CCT2 topics 1 – 5, calculator
Skills CCT1
Y11 December mock

Homework: weekly MathsWatch

CURRICULUM ENHANCEMENT and REVISION:

MyMaths links:
1087 1142 1321 1952 1118 1083 1088
MathsWatch links:
116 117 118 149 167 183
Google Drive: CCT revision folder

CORE KNOWLEDGE & KEY CONCEPTS:

Review the names of the parts of a circle.
Review the area and circumference of circles and sectors.
Recognise and apply circle theorems.
Solve circle problems and state the angles rules or circle theorems used to get to the answer.

GREATER DEPTH:

1) Proof of circle theorems.

KEY VOCABULARY/TERMS:

Radius	Diameter	Chord	Circumference	Arc
Sector	Segment	Tangent	In terms of	

The angle at the centre is twice the angle at the circumference
The angle in a semicircle is 90
Angles in the same segment are equal
Opposite angles in a cyclic quadrilateral add up to 180
A tangent is perpendicular to the radius
The angle between a chord and a tangent is equal to the angle in the alternate segment

PRIOR LEARNING

Y9 Topic 7 Angles, Polygons, Bearings
Y10 Topic 9 Bearings
Y10 Topic 10 Similarity, Congruency
Y10 Topic 13 Area and Volume

NEXT LEARNING

Y11 Topic 14 Proof
Y11 Topic 16 Geometry Review

CROSS CURRICULAR LINKS:

DEVELOPING TOMORROW'S LEADERS