YEAR 3 MATHS AT QUARRY HILL

WELCOME

QHA

Aim High, Fly High.

WHICH TOPICS ARE COVERED IN YEAR 3?

Place value and number

Addition, subtraction, multiplication and division

Fractions, Decimals and Percentages

Position and Direction, 2D/3D shape

Measure

Graphs and data

Time and money including coins

YEAR 3 CALCULATION POLICY

Calculation Policy Guidance

Year 3

Addition	Subtraction	Multiplication	Division
+ and = signs and missing numbers	**- = signs and missing numbers**	**x = signs and missing numbers**	**÷ = signs and missing numbers**

Addition

Partition into tens and ones and recombine
53 + 36= 89
(Begin to use numbers where the units exceed 10)

$$50 + 3$$
$$30 + 6$$
$$80 + 9 = 89$$

Add a near multiple of 10 to a two-digit number
Continue as in Year 2 but with appropriate numbers,
e.g. 35 +19 is the same as 35 + 20 – 1

$$83$$
$$+42$$
$$5 (3 + 2)$$
$$120 (80 + 40)$$
$$125$$

Formal written methods introduced
83 + 24 = 125

Children to work with HTU (3 digits)

Children to begin to use formal written methods **down** the page. Addition sign on the left of the problem. Add numbers with up to 3 digits, using formal written methods of column addition

$$358$$
$$+\;\;\;73$$
$$431$$

Add numbers mentally, including: a three-digit number and 1s, a three-digit number and 10s, a three-digit number and 100s.

Estimate answers and use inverse operations to check answers

Solve problems, including missing number problems, using number facts, place value, and more complex addition.

+ and = signs and missing numbers
Continue using a range of equations as in Year 1 and 2 but with appropriate larger numbers.

Add fractions with the same denominator within one whole [for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$

Subtraction

Continue using a range of equations as in Year and 2 but with appropriate numbers.

Find a small difference by counting up
Continue as in Year 2 but with appropriate numbers
e.g. 102 – 97 = 5

Subtract mentally a 'near multiple of 10' to or from a two-digit number
Continue as in Year 2 but with appropriate numbers
e.g. 78 – 49 is the same as 78 – 50 + 1

Pencil and paper procedures
Complementary addition
84 – 56 = 28

$$+4 \qquad +20 \qquad +4$$
$$56 \quad 60 \qquad 80 \quad 84$$

Consolidate number facts and calculation strategies from Year 3

$$7\,{}^8\!8\,{}^1 4$$
$$-\;\;2\;\;6$$
$$5\;\;8$$

$$2\,{}^8\!9\,{}^1 1$$
$$-\;\;\;5\;\;5$$
$$2\;3\;6$$

Children to begin to use formal written methods **down** the page Subtraction sign on the left of the problem

Adding and subtracting time to be completed using a number line.

Subtracting money with 0 2dp (e.g £1.00 or £20.00) to be completed on a number line. Calculations with less than 2 place holders can be completed using column subtraction.

Multiplication

Continue using a range of equations as in Year 2 but with appropriate numbers.

Number lines
6 x 3

$$0 \qquad 6 \qquad 12 \qquad 18$$

Arrays and repeated addition
Continue to understand multiplication as repeated addition and continue to use arrays (as in Year 2).

Doubling multiples of 5 up to 50
35 x 2 = 70

Doubling three digit numbers and multiples of 5, 10 and 100

$$200 + 60 + 10 = 270$$

Partition
35 x 2 = 70

30 x 2 = 60
5 x 2 = 10

$$60$$
$$+10$$
$$70$$

Times table facts to be learnt: 7s, 9s and 12s.

Division

Continue using a range of equations as in Year 2 but with appropriate numbers.

Understand division as sharing and grouping (repeated subtraction) eg 36 ÷ 4 = 9 can be modelled as: 36 can be shared between 4

$$36 \div 4 = 9$$

people, how many do they have each?

Grouping and remainders linked to times tables
How many 3's make 16? How many left over?
16 ÷ 3 = 5 r 1

Halving even numbers up to 100 and multiples of 10
Half of 480 = 240

$$200 + 40 + 0 = 240$$

Children to use informal written methods and formal written methods

Divisibility rules – for the 2, 3, 4, 5, 8. 10 and 100 times tables.

Write and calculate mathematical statements for division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.

Solve problems, including missing number problems, involving division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects.

ARITHMETIC

- Subtraction
- Addition
- Multiplication
- Division

QHA HIT METHODS

- Rally Coach
- Decisions Decisions
- SPOOF
- Quiz Quiz trade
- Talking chips
- Pilot Navigator
- Mix, Pair, Share
- Match Mine
- Silent Discussion

FLUENCY

Lines and ~~...~~

Fluency

1. Horizontal = 4 ✓
   vertical = 4 ✓
   Diagonal = 2 ✓
   Lines of symmetry = 2 ✓

2. Horizontal = 4 ✓
   vertical = 4 ✓
   Diagonal = 2 ✓
   Lines of symmetry = 1 ✓

3. Horizontal = 5 ✓
   vertical = 4 ✓
   Diagonal = 2 ✓
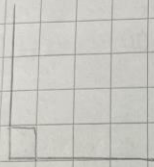   Lines of symmetry = 1 ✓

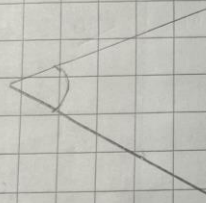Reasoning

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LI: To know times

Fluency

1. $9 \times 8 = 72$ ✓
   $8 \times 9 = 72$
   $72 \div 9 = 8$
   $72 \div 8 = 9$

2. $7 \times 8 = 56$ ✓
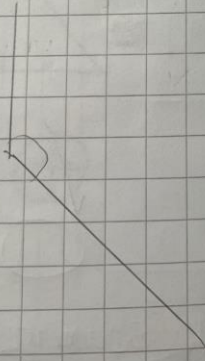 $8 \times 7 = 56$
   $56 \div 7 = 8$
   $56 \div 8 = 7$

10.1.2023

LI TO recognise different angles

Fluency

1. A right angle is a 90° angle. ✓

2. An acute angle is less than 90°. ✓

3. An obtuse angle is more than ~~...~~ and less than 180°.

REASONING

LI: To understand place value.

Fluency completed on whiteboards (AFL).

Reasoning
1. Tom is not correct and I don't agree because he mixed up the tens with the ones. It should be 5 counters for tens and 0 counters for the ones because in 450 there is 0 ones, 5 tens and 4 hundreds.

2. Zahtin is not correct because in 604 there is no tens because in the middle is tens but there is a 0 there ✓

Reasoning 1

I know Jack has a triangle because his shape has 3 lines of symmetry.

Horizontal line of symmetry	Vertical line of symmetry	Horizontal and vertical lines of symmetry

Eva completes the table by drawing shapes.
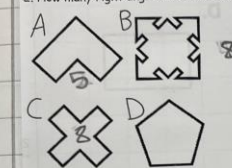
Can you spot and correct her mistake?

Eva placed the star in the wrong place because a star only has a vertical ✓ line of symmetry not horizontal ✓

LI: To identify right angles in shapes.

Fluency:
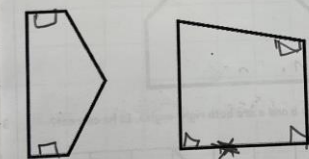1. Tick any shapes that contain right angles:

2. How many right angles are in each shape?

A = 5 ✓
B = 8 ✓
C = 8 ✓
D = 0 ✓

3. True or false? Both of these shapes have 2 right angles.

True because the first one has 2 and second 2. ✓

Reasoning
1. A because it is the only one without a right angle.

2. Alex is incorrect because the shape actually has 2 right angles. ✓

PROBLEM SOLVING

Notebook 1

Problem Solving

1.

Calculate how long it took each child to run the cross country race. Use a clock to help you.

	Start	Finish
Fred	14:15	14:45
Beth	14:15	14:50
Harry	14:15	14:40
Jess	14:15	14:48
Maya	14:15	14:51

Fred — 30 minutes
Beth — 35 minutes
Harry — 25 minutes
Jess — 33 minutes
Maya — 36 minutes

Notebook 2

Problem Solving

1. $15 \div 5 = 3$ ✓
$150 \div 3 = 50$ ✓
$50 \times 3 = 150$ ✓
$3 \times 5 = 15$ ✓

$8 \times 3 = 24$
$240 \div 80 = 3$
$30 \times 8 = 240$

Notebook 3

problem solving

1. $8 + 8 + 8 + 8 = 32$ cm

2. $28 - 10 - 10 = 8$ cm

$8 \div 2 = 4$ cm

$10 + 10 + 4 + 4 = 28$ cm

Notebook 4

1. $112 \div 8 = 14$

014
$8 \overline{)1^{1}3^{3}2}$

14 tablems are needed to seat 112 people. ✓

2. $1,000 \div 34 =$

0 34 68 102 136 170 204 238 272 306 340 374

HOW CAN YOU HELP AT HOME?

Mirodo homework is set weekly. It is set on a Friday and should be completed by the Wednesday

PUPIL LOGIN   PARENT LOGIN

New Layer

Mirodo

purple mash

QUESTIONS