<u>Progression with Number Sequencing</u>

Stage 0-1	**Stage 2 & 3** ****After 1 year at school****	**Stage 4** ****After 2 years at school****	**Stage E5** **** End of Year 3 ****	**Stage 5** **** End of Year 4 ****	**Stage E6** **** End of Year 5 ****	**Stage 6** **** End of Year 6 ****	**Stage E7** **** End of Year 7 ****	**Stage 7** ** End of Year 8 **
Numbers from 0 to 10	Numbers from 10 to 20	2 / 3-digit numbers	3 / 4-digit numbers	4 / 5-digit numbers	5, 6 and 7-digit numbers	ALL whole numbers Decimal numbers (1 dp)	Decimal numbers (2 dp)	Decimal numbers (to ANY dp)
I can recognise numbers from 0 to 10. *(read / say / write / count it out)* **I can order numbers from 0 to 10.** *(count forwards / backwards, ordering e.g. 1, 2, 3 or 10, 9, 8, number before / after, smallest to largest, largest to smallest etc.)* **I can recognise patterns to 5.** *(tens frames, fingers, tally, dot patterns)*	**I can recognise numbers from 10 to 20.** *(read / say / write / partition / count it out)* **I can order numbers from 10 to 20.** *(count forwards / backwards, ordering, before / after, smallest to largest etc.)* **I can skip count forwards and backwards to and from 20 in different amounts.** *(multiples of 2 / 5)* **I can recognise patterns to 10.** *(tens frames, fingers, tally)*	**I can recognise 2 / 3-digit numbers.** *(read / say / write / partition)* **I can order 2-digit numbers.** *(count forwards / backwards, ordering, before / after, smallest to largest, more than > / less than < symbols and statements etc.)* **I can skip count forwards and backwards to and from 100 in different amounts** (*multiples of 1 / 2 / 5 / 10 starting from any even number, any number ending with 0 or 5 and any number)*	**I can recognise 3 / 4-digit numbers.** *(read / say / writ, partition)* **I can order 3-digit numbers.** *(count forwards / backwards, ordering, before / after, smallest to largest, more than > / less than < symbols and statements etc.)* **I can skip count forwards and backwards to and from 1000 in different amounts from any starting number** *(1 /10 / 100 and crossing 10s/100s boundaries)*	**I can recognise 4 / 5-digit numbers.** *(read / say / write, partition)* **I can order 4-digit numbers.** *(count forwards / backwards, ordering, before / after, smallest to largest, more than > / less than < symbols and statements etc.)* **I can skip count forwards and backwards to and from 10,000 in different amounts from any starting number.** *(1/ 10 / 100 / 1000)*	**I can recognise all numbers to 1, 000,000** *(read / say / write, partition)* **I can order all numbers to 1, 000,000** (*count forwards / backwards, ordering, before / after, smallest to largest, more than > / less than < symbols and statements etc.)* **I can skip count forwards and backwards to and from 100,000 in different amounts from any starting number.** *(1 / 10 / 100 / 1000 / 10,000)*	**I can recognise ALL whole numbers.** *(read / say / write, partition)* **I can recognise numbers to 1 decimal place.** *(read / say / write)* **I can order numbers to 1 decimal place.** *(count forwards / backwards, order, put on a number line)* **I can skip count forwards and backwards in different amounts from any starting number.** *(0.1 / 1)*	**I can recognise numbers to 2 decimal places.** *(read / say / write / partition)* **I can order number to 2 decimal places.** *(count forwards / backwards, order, put on a number line)* **I can skip count forwards and backwards in different amounts.** *(0.01 / 0.1 / 1)*	**I can recognise numbers to 2 or more decimal places.** *(read / say / write, partition)* **I can order numbers to 2 or more decimal places.** *(count forwards / backwards, order, put on a number line)* **I can skip count forwards and backwards in different amounts.** *(0.001, 0.01 / 0.1 / 1)*

Progression with Place Value

Stage 0-1	Stage 2 & 3 **After 1 year at school**	Stage 4 **After 2 years at school**	Stage E5 ** End of Year 3 **	Stage 5 ** End of Year 4 **	Stage E6 ** End of Year 5 **	Stage 6 ** End of Year 6 **	Stage E7 ** End of Year 7 **	Stage 7 ** End of Year 8 **
Numbers from 0 to 10	Numbers from 10 to 20	2-digit numbers	3-digit numbers	4 / 5-digit numbers	5, 6 and 7-digit numbers	ALL whole numbers Decimal numbers (1/2dp)	Decimal numbers (2 dp)	Decimal numbers (to ANY dp)
		I can recognise tens in a two-digit number. *e.g. 76 has 7 tens*	**I can recognise tens or hundreds in a 3-digit number.** *e.g. 763 has 76 tens* *e.g. 763 has 7 hundreds* **I can round 2 and 3-digit numbers** *(to 10 / 100)*	**I can recognise tens or hundreds in a 4 / 5-digit number.** *e.g. 4763 has 476 tens* *e.g. 4763 has 47 hundreds* *e.g. 4763 has 4 thousands* **I can say that 800 is 8 centuries and that 4000 is 40 centuries or hundreds.** **I can round 3 and 4-digit numbers** *(to 10 / 100 / 1000)*	**I can recognise tens, hundreds and thousands in all numbers to 1,000,000.** *e.g. 64,341 has 6,434 tens / 643 hundreds I 64 thousands* **I can use my understanding of multiplying and dividing by 10, 100 and 1000 to work out how many 10s, 100s and 1000s are in numbers.** **I can round all numbers up to 10,000** *(to 10 / 100 / 1000 / 10,000)*	**I can recognise tens, hundreds, thousands etc in ALL whole numbers.** **I can recognise tenths in numbers to 1 decimal place e.g.** *5.1 has 51 tenths* **I am beginning to recognise how many hundredths are in decimal numbers with up to 2 decimal places.** *e.g. 2.84 is 284 hundredths* **I can round ALL whole numbers up to 1,000,000.** (nearest 1,10,100,100) **I can round decimals up to 2dp.** *(nearest whole number)*	**I can recognise tenths and hundredths in numbers to 2 decimal places.** *e.g. 5.12 has 51 tenths* *e.g. 5.12 has 512 hundredths* **I can round decimals.** *(nearest whole or tenth)*	**I can recognise tenths and hundredths in whole numbers and ANY decimal places.** *e.g. 5.12 has 51 tenths* *e.g. 5.12 has 512 hundredths* **I can round ANY decimals.** *(nearest whole or tenth or hundredth)*

Progression with Basic Facts

Stage 0-1	Stage 2 & 3 **After 1 year at school**	Stage 4 **After 2 years at school**	Stage E5 ** End of Year 3 **	Stage 5 ** End of Year 4 **	Stage E6 ** End of Year 5 **	Stage 6 ** End of Year 6 **	Stage E7 ** End of Year 7 **	Stage 7 ** End of Year 8 **
Numbers from 0 to 10	Numbers to 10	2-digit numbers	2 and 3-digit numbers	2 and 3-digit numbers Multiplication and division facts (2,5,10)	Multiplication and division facts (3,4,6)	Multiplication & division facts up to 10 x 10 (7,8,9)	Multiplication and division facts Fractions / decimals / percentages	Fractions / decimals / percentages
	I can instantly recall addition and subtraction facts to 5. *e.g. 3 + 2 = 5* *e.g. 5 - 2 = 3* **I can instantly recall number bonds to 10.** *e.g. 7 + 3 and 2 + 8* **I can instantly recall doubles and halves to 10.** *e.g. 5 + 5* *e.g. half of 10* **I can identify teen numbers (read / say / write)**	**I can identify teen and ty numbers (read / say / write, partition)** **I can instantly recall addition and subtraction facts to 10.** *e.g. 6 + 3 = 9* *e.g. 7 - 3 = 4* **I can instantly recall number bonds to 100.** *(with multiples of 10)* *e.g. 80 + ? = 100* **I can instantly recall doubles and halves to 20.** *e.g. 10 + 10 = 20* *e.g. half of 20*	**I can instantly recall addition facts to 20.** *e.g.16 + 2 = 18* **I can instantly recall number bonds of multiples of 10 up to 100** e.g. number bonds to 20, 30 etc 15+?=20 **I can instantly recall number bonds to 1000** *(with multiples of 100)* *e.g. 800 + ? = 1000* **I can instantly recall doubles and halves to 100.** *e.g. 30 + 30* *e.g. half of 70* *e.g. link to x2 and ÷2* **I can understand what is meant by the word multiple.** **I can give multiples of numbers up to 100** *(2,5,10) e.g. 42 and 64 are multiples of 2 and 85 and 100 are multiples of 5*	**I can instantly recall all addition and subtraction facts to 20.** *e.g.16 - 5 =11* **I can generate fact families.** *(e.g. 4 + 5 = 9 so 5 + 4 = 9, 9 - 5 = 4, 9 - 4 = 5)* **I can instantly recall number bonds to 100 and 1000 using any number.** *e.g. 83 + ? = 100* **I can instantly recall the multiplication and division facts for 2** **I can instantly recall the multiplication and division facts for 5** **I can instantly recall the multiplication and division facts for 10**	**I can instantly recall the multiplication and division facts for 3** **I can instantly recall the multiplication and division facts for 4** **I can instantly recall the multiplication and division facts for 6**	**I can instantly recall the multiplication and division facts for 8** **I can instantly recall the multiplication and division facts for 9** **I can instantly recall the multiplication and division facts for 7** **I am beginning to understand what is meant by 'factors'.**	**I can recall fraction to decimal to percentage conversions.** e.g. ½ = 0.5 = 50% e.g. ¼ = 0.25 = 25% e.g. 1/10 = 0.1 = 10% **I can recall divisibility rules** *e.g. for 2, 5, 10* **I can identify multiples (of ALL numbers (up to 10 x10)** *e.g. Multiples of 6 up to 48* **I can identify factors (to 100)**	**I can convert fractions to decimals and percentages (and vice versa) (***including percentages beyond 1 whole)* **I can convert improper fractions to decimals and percentages (and vice versa)** **I can simplify fractions using knowledge of multiplication, factors and multiples.** *(e.g. 12/20 = 3/5)* **I can recall and apply common divisibility rules (for 3,4,9)** **I can give the least common multiple (LCM) of numbers** *(e.g. LCM of 6 and 9 is 18)* **I can give the highest common factor (HCF) of 2 two-digit numbers (***e.g. HCF of 12 and 28 is 4)*

Progression with Fractions

Stage 0-1	Stage 2 & 3 **After 1 year at school**	Stage 4 **After 2 years at school**	Stage E5 ** End of Year 3 **	Stage 5 ** End of Year 4 **	Stage E6 ** End of Year 5 **	Stage 6 ** End of Year 6 **	Stage E7 ** End of Year 7 **	Stage 7 ** End of Year 8 **
	Halves and quarters	Halves, thirds, quarters, fifths	tenths	Recognising & ordering proper fractions	Recognising proper / improper ordering fractions	Recognising & ordering ALL fractions ALL Improper fractions.	Equivalent fractions Order ALL fractions	Comparing ALL common fractions
	I can recognise (read, write and represent) halves and quarters to 20 *(shapes and sets)*	**I can recognise (read, write and represent) fractions: halves / quarters / thirds / fifths.**	**I can recognise (read, write and represent) tenths.** **I can recognise when shapes are divided into tenths.** **I can identify the numerator and denominator and explain what they represent.** (e.g. ¾ means the whole is cut into 4 and 3 are *shaded*)	**I can recognise (read, write and represent) ALL fractions with a numerator of 1.** *(e.g. 1/20, 1/16)* **I can recognise (read, write and represent) ALL proper fractions with numerators bigger than 1.** *(e.g. ¾)* **I can put fractions with the same denominator in order from the smallest to the largest or vice versa.** **I can put fractions with 1 as the numerator in order from the smallest to the largest or vice versa.** *(e.g. ½, ¼)* **I can recognise simple equivalent fractions.** *(e.g. ½ = 2/4 2/4 = ½)* **I can read, write and represent improper fractions.** *(e.g. 5/4 7/5)*	**I can recognise (read, write and represent) ALL proper fractions** *(e.g. one quarter, ¼, six eighths 6/8)* **I can recognise (read, write and represent) <u>some</u> <u>simple</u> improper fractions.** *(e.g. 3/2, 4/3, 5/4, 6/5)* **I can turn improper fractions into mixed numbers by using multiplication.** *(e.g. 16/3 = 5 ⅓ using 5 x 3 =15) So, 5 whole ones and ⅓* **I can fold shapes to recognise equivalent fractions.** *(e.g. 9/12 = ¾)* **I can put fractions with the same numerator in order from the smallest to the largest or vice versa.** *(e.g. 1/2 , 1/5, 1/7)*	**I can recognise (read, write and represent) ALL proper, improper and mixed fractions.** *(e.g. 2 2/6= 2 whole pizzas and 2 / 6 of a third pizza.)* **I can convert improper and mixed fractions.** *(e.g. 1 ¼ = one whole and one quarter, or five quarters)* **I can put fractions with the same numerator or same denominator in order from the smallest to the largest or vice versa.** *(e.g. 1/2 , 1/5, 1/7)*	**I can put proper fractions with the same numerator and different denominator in order,** e.g. ½, ¼ and $^{1}/_{10}$ from smallest to the largest or vice versa. **I can identify the smallest / largest proper fraction in a set when they have different numerators AND denominators** e.g. 1/3, 3/8, 4/10, 1/3 is the smallest) **I can order fractions with unlike denominators by comparing fraction sizes on a fraction wall,** *e.g. 2/6 > 1/4* **I can put proper fractions with different numerators and denominators in order,** e.g. ½, ⅘, ⅔, ⅜ from smallest to largest and vice versa. **I can turn improper fractions into mixed numbers by using division,** *e.g. 47/7 to 6 5/7 (using 47 ÷ 7= 6 r 5)* **I can turn more complex mixed numbers into improper fractions by,** *e.g. 6 5/6 to 41 / 6 or 41 sixths* **I can identify equivalent fractions for halves, quarters and tenths with denominators of 10, 100 and 1000.** *E.g.1/4 = 25/100,*	**I can compare any proper fractions (halves / thirds / quarters / fifths / eighths/ tenths) and explain which is larger / smaller using number conversions as well as pictures.** (e.g. 2/5 = 40 / 100 and ¾ = 75 / 100 so 3 / 4 is bigger) **I can compare improper fractions and explain which is larger / smaller using number conversions as well as pictures.** **I can use my knowledge of common factors and multiples to support this.** **I can use the greater than and less than symbols to compare both proper and improper fractions.** **I can put all common proper and improper fractions in order and explain which is larger / smaller using number conversions as well as pictures.** (e.g. 3/2, 7/4, 19/10, 9/3) **I can find common denominators and simplify fractions to help support ordering fractions.** **I can identify equivalent fractions for thirds, fifths, with denominators of 10, 100 and 1000.** E.g.1/4 = 25/100, ⅔ = 66/100

Progression with ADD / SUB Strategies

Stage 0-1	Stage 2 & 3 **After 1 year at school**	Stage 4 **After 2 years at school**	Stage E5 ** End of Year 3 **	Stage 5 ** End of Year 4 **	Stage E6 ** End of Year 5 **	Stage 6 ** End of Year 6 **	Stage E7 ** End of Year 7 **	Stage 7 ** End of Year 8 **
1 to 1 counting	1 to 1 counting	Count on / back	Basic strategies: doubling & making tens	PVP strategy & making tens	PVP strategy (3-digit numbers) Reverse (3 digit)	PVP strategy / algorithm Round and compensate Reverse	DECIMALS PVP strategy / algorithm Round and compensate Reverse Integers (basic)	DECIMALS (all) PVP strategy / algorithm Round and compensate Reverse Integers (complex)
I can count sets of materials up to 10 **I can make sets of materials up to 10**	**I can count all the objects to find the answer.** **I can count all the objects <u>in my head</u> to find the answer.** **I can add two groups together by counting all the objects in my head up to 20,** *e.g. 5 + 4 = 9 and 12 + 4 = 16* **I can take away from a group up to 20 in my head and count what is left,** *e.g. 9 – 3 = 6 and 20 - 2 = 18* **I can add groups of 10 to find the answer,** *e.g. 30 + 40 = 70 because I know 3 + 4 = 7* **I can take away groups of 10 in my head to find the answer,** *e.g. 60 - 40 = 20 because I know 6 - 4 = 2*	**I can count forwards from the largest number in my head to find the answer.** *e.g. 9 + 4 = I put 9 in my head then count on 4 more…10, 11, 12, 13* **I can count backwards from the largest number in my head to find the answer.** *e.g. 12 - 4 = I put 12 in my head then count back 4… 11, 10, 9, 8* **I can solve addition and subtraction problems with groups of tens and ones, using place value materials e.g.** *30 + 20 = 50, 63 – 30 = 33, 65 – 32 = 33)* **I can check my answers.**	**I can use known basic facts to find the answer.** *e.g. 8 + 7 = I know 10 + 7 = 17 so 8 + 7 = 15* **I can use doubles to solve addition problems.** *e.g. 8 + 7 = I know 8 + 8 = 16 so 8 + 7 = 15. Using x2 and ÷2 will help support this.* **I can make tens (tidy numbers) to solve addition problems.** *e.g. 8 + 7 = I know 8 + 2 = 10 and 10 + 5 = 15* **I can use compatible numbers to solve problems up to 20 (by not counting).** *(e.g. 8 + 2 + 7 – 9 = 8 2 + 7 = 9 so remove them to leave 8)* **I can solve problems adding or taking a single digit up to 100 by making connections with how the family of facts** *(e.g. 45 – 7 = I know 45 – 5 = 40 and 40 – 2 = 38)* **I can check my answers.**	**I can use place value (partitioning) to:** **…add 2-digit numbers.** *e.g. 44 + 25= I know 40 + 20 = 60 and 4 + 5 = 9 so the answer is 69* **…subtract 2-digit numbers.** *e.g. 79 – 34 = I know 79 – 30 = 49 and 49 – 4 = 45 **Only the second number is partitioned* **I can use a near double to solve a problem with numbers which are close to 25, 50 and 100** *(e.g. 24 + 26 = 50 by 25 + 25 and 52 + 51=103 By 50 + 50 = 100 and 100 + 3 = 103* **I can use compatible numbers to solve problems up to 100.** **I can work back through ten and use tidy numbers to find the answer.** *e.g. 45 – 7 = I know 45 – 5 = 40 and 40 – 2 = 38*	**I can use my knowledge of rounding to estimate answers to addition and subtraction problems involving 3-digit numbers.** **I can use place value (partitioning) to:** **… add 3-digit numbers.** *e.g. 463 + 215 = I know 400 + 200 = 600 and 60 + 10 = 70 and 3 + 5 = 8 so answer is 678 - start with ones or hundreds.* **…subtract 3-digit numbers.** *e.g. 463 - 212 = I know 463 - 200 = 263 and 263 - 10 = 253 and 253 – 2 = 251) **only second number is partitioned*** **I can reverse a subtraction problem and solve it using known strategies.** *e.g. 137 – 125 = I can change it to 125 + ? = 137* **I can use a number line to solve + and - problems with up to 3 digits.** **I can use an equal addition strategy to make a tidy number to solve subtraction problems over a 100.** *(e.g. 138 – 18 as 140 – 20 = 120)* **I can use doubles and near doubles of numbers in 100's** **I can check my answers using inverse operations** *(e.g. 137 – 125 = 22 can be checked with 125 + 22 = 137)*	**I can use my knowledge of rounding to estimate answers to addition and subtraction problems involving whole numbers.** **I can use place value partitioning & algorithms to:** **…add ANY numbers** *e.g. 7331 + 258 = I know to add the ones, tens, hundreds and thousands. The answer is 7589* **…subtract ANY numbers.** *e.g. 8935 – 6123 = I know to subtract the ones, tens, hundreds and thousands. The answer is 2812 **only second number is partitioned*** **I can use rounding and compensating to:** **…add numbers.** *e.g. 135 + 999 >> 135 + 1000, then – 1* **…subtract numbers.** *e.g. 834 – 398 >> 834 – 400, then +2* **I can use a mixture of strategies to solve + and - problems like reversibility, equal additions, doubles / near doubles, making tens and using a number line.** *e.g. 2013 – 1985 = I know that 1985 + 15 = 2000 and 2000 +13 = 2013 so the answer is 28*	**I can use my knowledge of rounding to estimate answers to addition and subtraction problems involving whole numbers and decimals.** **I can use place value (partitioning) & algorithms to:** … add decimals (2dp) … to subtract decimals (2dp) **I can use rounding and compensating to**: …add decimals (2dp) …to subtract decimals (2dp). **I can reverse a subtraction problem and solve it using known strategies (2dp). Using a number line may support this.** *E.g. 6.03 - 5.8 as 5.8 + ___ = 6.03* **I can use a mixture of strategies to solve addition and subtraction problems involving decimals to 2dp** *(see S6).* **I can use a number line to solve simple integer problems.** E.g. 3 - 7= - 4 **I can use integers (positive and negative numbers) to solve problems with numbers between +10 and -10** *e.g. -1 + +4 = +3 OR +1 + - 4 = - 3*	**I can use my knowledge of rounding to estimate answers to addition and subtraction problems involving whole numbers and numbers with a mixed number of decimal places.** **I can use place value (partitioning) & algorithms to:** *… add decimals (mix of 1, 2 and 3dp)* *… to subtract decimals (mix of 1, 2 and 3dp)* **I can use rounding and compensating to**: *…add decimals (mix of 1, 2 and 3dp)* *…to subtract decimals (mix of 1, 2 and 3dp)* **I can reverse a sub. problem and solve it using known strategies (mix of 1, 2 and 3dp). using a number line may support this.** *E.g. 1.5 – 0.085 = 0.085 + ____ = 1.5.* **I can use a mixture of strategies to solve + and - problems involving decimals with up to 3 dp and a mix** *e.g. place value, reversing, compatible numbers, tidy numbers, equal additions, doubles / near doubles.* **I can solve complex integer problems.** *e.g. -64 + + 58 = - 6 OR +72 – - 28 = +100*

Progression with MULT / DIV Strategies

Stage 0-1	Stage 2 & 3 **After 1 year at school**	Stage 4 **After 2 years at school**	Stage E5 ** End of Year 3 **	Stage 5 ** End of Year 4 **	Stage E6 ** End of Year 5 **	Stage 6 ** End of Year 6 **	Stage E7 ** End of Year 7 **	Stage 7 ** End of Year 8 **
		Skip counting (2, 5, 10)	X 2,10 and adding	X 2,5,10 (and adding)	Some 10 x 10 facts (and adding) Reverse PVP (TO x O)	ALL 10 x 10 facts Double & halve PVP (TO x O) Round and compensate	PVP (TO x TO) PVP (HTO x O) Round and compensate Reverse Divide with remainders	ALL strategies (3-digit no's) Decimals
		I can skip count in <u>twos</u> to find the answer to word problems. *(e.g. 5 chickens lay 2 eggs each. How many eggs did they lay altogether?2, 4, 6, 8, 10)* **I can skip count in <u>TENS</u> to find the answer to word problems.** *(e.g. 10 chickens lay 6 eggs each. How many eggs did they lay altogether?... 10, 20,30,40,50,60)* **I can skip count in <u>fives</u> to find the answer to word problems.** *(e.g. 5 chickens lay 5 eggs each. How many eggs did they lay altogether?5, 10, 15, 20, 25)* **We are learning to solve division problems by using materials to share equally in sets of 1, 2 and 5** *(e.g. I can share into sets of 1, I can share into sets of 2, I can share into sets of 5)*	**I can use a combination of multiplication and repeated addition to find the answer.** *(e.g. 3 packets of biscuits with 5 in each packet. I know 2 x 5 = 10 and 10 + 5 = 15)* **I can draw an array to show a multiplication fact,** *e.g. 4 x 3 and show how it is different to 3 x 4 but is the same value*	**I can use 2, 5 and 10 multiplication facts to find the answer.** *(e.g. 3 packets of biscuits with 5 in each packet. I know 3 x 5 = 15)* **I can use a combination of multiplication and repeated addition to find the answer.** *(e.g. 8 x 12 = I know 8 x 10 = 80 and 80 + 8 = 88 and 88 + 8 = 96)* **I can generate division facts from known multiplication facts.** **I can use doubling and halving.** *(e.g. I can use my x 10 tables to work out my x 5 tables, like 2 x 10 = 20 so 4 x 5 = 20)*	**I can use known multiplication and division facts (up to 10 x 10) to find the answer.** *(e.g. 8 x 6 = I know that 8 x 5 =40 and 40 + 8 = 48)* **I can reverse a division problem and solve it using known multiplication facts (up to 10 x 10).** *(e.g. 36 ÷ 6 = I can change it to 6 x ___ = 36)* **I can use place value (partitioning) and known multiplication facts (up to 10 x 10) to solve multiplication problems.** *(e.g. 14 x 7 = I know that 10 x 7 = 70 and 4 x 7 = 28 then I add those together to get 98)* **I can solve division problems which have remainders.** *(e.g. 43 ÷ 5 = 8 r 3 because 5 x 8 = 40 with 3 left over or 39 ÷ 4 = 9 ¾ or 9.75)*	**I can use all multiplication and division facts to 10 x 10 to find answers.** *(e.g. 45 ÷ 9 = 9 x ? =)* **I can use doubling and halving to find the answer to multiplication and division problems.** *(e.g. 15 x 6 = I know that 30 x 3 = 90)* **I can use a trebling and thirding strategy to solve multiplication problems.** *(e.g. 3 x 18 = as 9 x 6 = 54)* **I can use place value (partitioning) to multiply a 2-digit number by a 1-digit number.** *(e.g. 23 x 7 = I know that 20 x 7 = 140 and 3 x 7 = 21 then I add those together to get 161)* **I can use rounding and compensating to multiply a 2-digit number by a 1-digit number.** *(e.g. 19 x 8 = I know that 20 x 8 = 160 and 160 – 8 =152)*	**I can use place value (partitioning) to multiply a 2-digit number by a 2-digit number.** *E.g. 23 x 11* **I can use place value (partitioning) to multiply a 3-digit number by a 1-digit number.** *E.g. 236 x 7* **I can use rounding and compensating to multiply a 2-digit number by a 1-digit number.** *E.g. 29 x 7* **I can use rounding and compensating to multiply a 2-digit number by a 2-digit number.** *E.g. 19 x 16* **I can use rounding and compensating to multiply a 3-digit number by a 1-digit number.** *E.g. 199 x 6* **I can use doubling / halving, trebling/thirding and a standard written form to x and ÷** **I can use a mixture of strategies to solve division problems, including those involving remainders.** *E.g. 87 ÷ 5 = 17 r 2 OR 81 ÷ 3 = 3 x ___ = 81, 3 x 20 = 60, then 3 x 7 = 21.*	**I can use a mixture of strategies to solve 3-digit number problems;** *PVP, reverse, round and compensate, double and halve, standard written method* *e.g. 114 ÷ 6 = 6 x <u>19 =</u> 114. Because… 6 x 20 = 120 then – (1 x 6)* **I can use a mixture of strategies to solve <u>decimal</u> equations;** *PVP, reverse, round and compensate, double and halve, standard written method* *e.g. 1.5 x 12 (could do… 3 x 6 OR 1 x 12 + 0.5 x 12…)*

Progression with FRACTIONS & PROPORTIONS Strategies

Stage 0-1	Stage 2 & 3 **After 1 year at school**	Stage 4 **After 2 years at school**	Stage E5 ** End of Year 3 **	Stage 5 ** End of Year 4 **	Stage E6 ** End of Year 5 **	Stage 6 ** End of Year 6 **	Stage E7 ** End of Year 7 **	Stage 7 ** End of Year 8 **
		½ or ¼ with materials ½ or ¼ using diagrams / imaging	½ or ¼ using halving or addition facts	½, ¼, 1/5 using addition ½, ¼, 1/5 using mult / div Ratios	Fractions using known mult / div facts Ratios	Fractions using ALL mult / div facts (up to 10 x 10) 2 step fractions equations Ratios (up to 10 x 10)	Add / sub fractions Complex fraction equations Ratios – simple equivalence	Add / sub fractions Improper fractions 2 step ratio Q
		I can find <u>half</u> of sets by sharing materials equally *(e.g. ½ of 18)* **I can find <u>quarter</u> of sets by sharing materials equally** *(e.g. ¼ of 20)* **I can find <u>half</u> of sets by sharing equally in my head or drawing a picture.** *(e.g. ½ of 18)* **I can find <u>quarter</u> of sets by sharing equally in my head or drawing a picture.** *(e.g. ¼ of 16)* **I can find fractions of different shapes by folding into equal parts** *(e.g. 1/8 - eighth, 1/3 - third, 1/6 - sixth)* **I can use materials to make a fraction of a set into a whole set.** *(e.g. 3 is a third of a set so the whole set is 3 + 3 + 3 and there is 9 in the whole set)*	**I can find quarter of a whole number using halving facts OR simple addition** (3 + 3 + 3 + 3) *(e.g. ¼ of 12 = I know ½ of 12 is 6 and ½ of 6 is 3)* **I can find a fraction of a number by halving or by using equal addition.** *(½ of 10 = 5 because 5 + 5 = 10 and 1/3 of 12 is 4 because 4 + 4 + 4 = 12 also ¼ of 28 = 7 because ½ of 28 is 14 and ½ of 14 is 7*	**I can find the fraction of a whole number using repeated addition.** *(e.g. ¼ of 16 = 4 because I know that 4 + 4 + 4 + 4 = 16)* **I can find the fraction of a whole number using known multiplication and division facts.** *(e.g. ⅓ of 15 = 5 because I know that 3 x 5 = 15)* I **can solve ratio problems using known addition facts.** *(e.g. A chicken lays 3 eggs every 2 days. How many eggs would it lay in 6 days? I know that 3 + 3 + 3 = 9)*	**I can use known division facts to find 1 part of a set**. *(e.g. 1/5 of 40 = 8 because I know that 40 ÷ 5 = 8)* **I can use known division facts to find fractions of sets when the numerator is more than 1.** *(e.g. ¾ of 24 = 18 because 24 ÷ 4 = 6 and 6 x 3 = 18)* **I can solve ratio problems using known multiplication facts.** *(e.g. 2: 5 = 6 : ___ I know 2 x 3 = 6 and 5 x 3 = 15 so the answer is 6:15)* **I can solve simple 1: 2 ratio problems by repeated copying.**	**I can find fractions of sets when the numerator is more than 1.** *(e.g. 5/7 of 56)* **I can solve 2 step fraction equations.** *E.g. If I spent $6 and have 2/3 of my money left, how much did I start with?* **I can solve ratio problems by using all multiplication and division facts to 10 x 10.** *(e.g.32 carrots in 4 bags, so XXX in 12 bags. 4: 32 is equal to 12:96)*	**I can add fractions with the same / similar denominator.** *e.g. ¼ + 3/8 = 5/8* **I can subtract fractions with the same / similar denominator.** *e.g. 7-8-3-8 = 4/8 or 1/2* **I can solve fraction equations that have a missing value** *E.g. ¾ of __ = 32* **I can find simple equivalent ratios.** *E.g. 3:5 as ___:40*	**I can add fractions with <u>different</u> denominator by simplifying.** *e.g. 3/8 + 2/6 = 9 / 24 + 8 / 24 = 17/24* **I can subtract fractions with <u>different</u> denominator by simplifying.** **I can solve fraction problems involving improper fractions** *(e.g. 6 cars filled up ¾ of their tank with fuel = how many full tanks is this equivalent to?)* 6 x ¾ = 18 / 4 = 4 ½ **I can use efficient strategies to find complex equivalent ratios**. *E.g. 6: 14 is equal to ___:21*