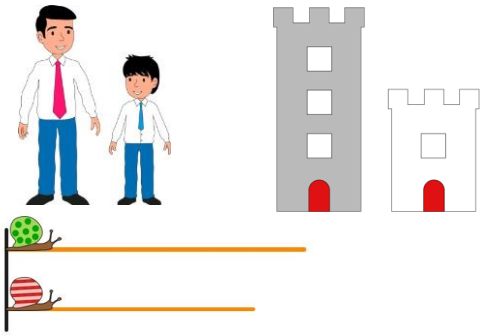
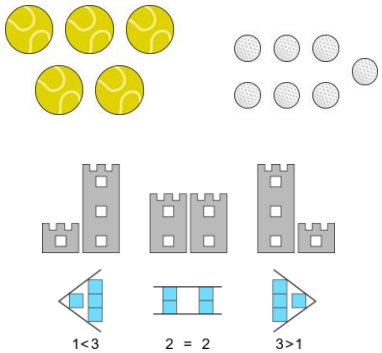
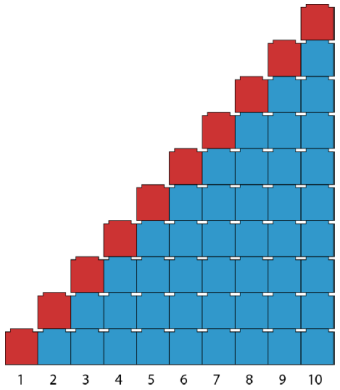
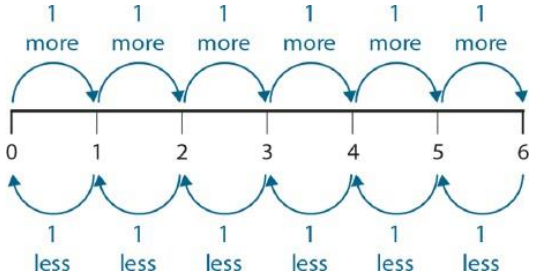
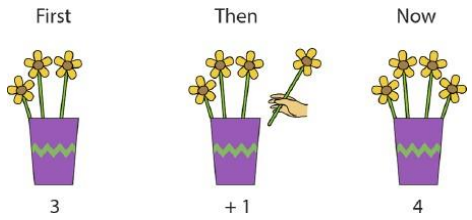
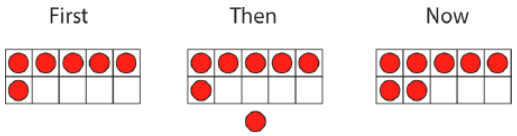
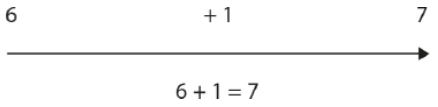
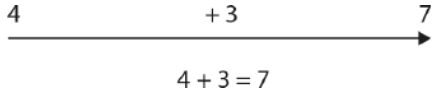
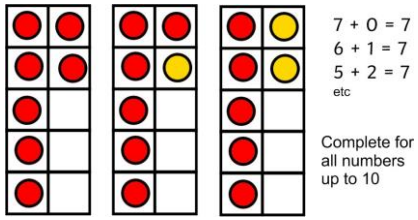
Y1

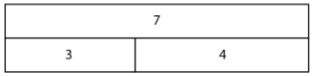
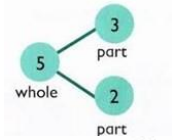
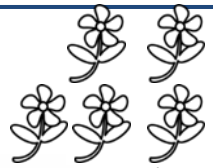
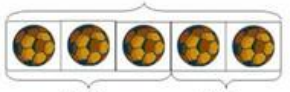
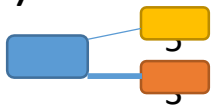
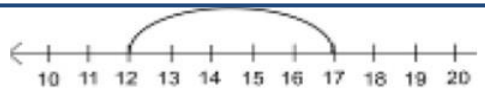
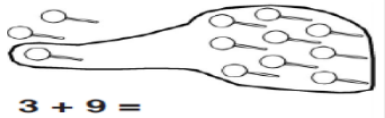
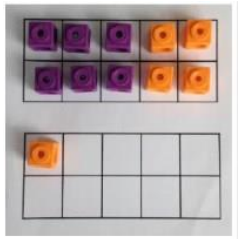
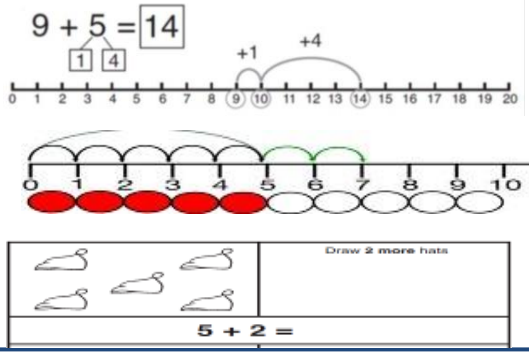
ADDITION +

Objective, Strategy & Key Vocabulary	Concrete	Pictorial	Abstract
Comparing Objects, groups of objects Length, weight, mass, heavier, light-er, same, equal	People's height, distance, mass. Use of pan balances using numicon to show equivalence, < > Comparing multiple objects Use of concrete materials eg. Compare bears, jewels, cubes etc to create groups of different sizes to compare		
Using < > and = Fewer, more, less than, more than, equal to, fewer than	Use a multilink staircase in two colours		Use variation with missing boxes and missing symbols. 3 ◯ 4 4 > □ 2 ◯ 2 □ < 6
Finding one more, finding one less			One more/less sentences – example one: 1 more than 3 is □ 1 less than 2 is □ 1 more than □ is 1 1 less than □ is 1

Y1 ADDITION +

Objective, Strategy & Key Vocabulary	Concrete	Pictorial	Abstract
Adding 1 gives 1 more			
Augmentation—increasing an amount	Use FIRST, THEN, NOW and range of practical situations for showing augmentation. E.g. first there were three chn on carpet then 2 more came. Now there are 5 chn on the carpet.		
Stories of numbers within 10	Children should work with doubled sided counters and ten frame. Start with 7 red, turn one over, tell me the 'story'? Turn one more over. What is the 'story'? Continue. Complete this for stories of all numbers up to 10.		7 + 0 = 7 6 + 1 = 7 5 + 2 = 7 4 + 3 = 7 3 + 4 = 7 2 + 5 = 7 1 + 6 = 7 0 + 7 = 7

Y1 ADDITION +

Objective & Strategy	Concrete	Pictorial	Abstract
Combining two parts to make a whole: part- whole model	  Use part part whole model.  Use cubes to add two numbers together as a group or in a bar.  	   Use pictures to add two numbers together as a group or in a bar. 	4 + 3 = 7  10= 6 + 4 Use the part-part whole diagram as shown above to move into the abstract.
Regrouping to make 10. *This is an essential skill for column addition later.*	 = 11  2 more than 5.	 Start at the larger number on the number line and count on in ones or in one jump to find the answer. 	7 + 4= 11 If I am at seven, how many more do I need to make 10. How many more do I add on now?
Represent & use number bonds and related subtraction facts within 20	 Start with the bigger number and use the smaller number to make 10. Use ten frame 	Use pictures or a number line. Regroup or partition the smaller number using the part part whole model to make 10. 	Emphasis should be on the language *'1 more than 5 is equal to 6.'* *'2 more than 5 is 7.'* *'8 is 3 more than 5.'*

Adding 1 and 2 | Bonds to 10 | Adding 10 | Bridging/ compensating

Doubles | Adding 0 | Near doubles

Y1 facts

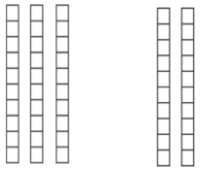
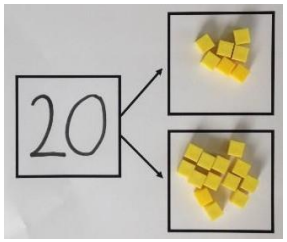
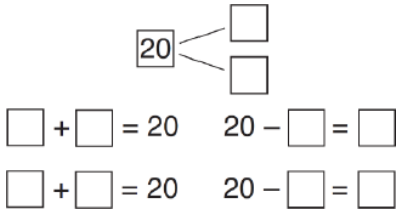
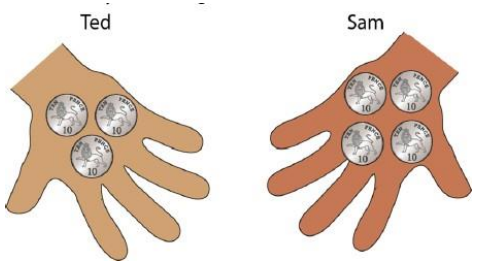
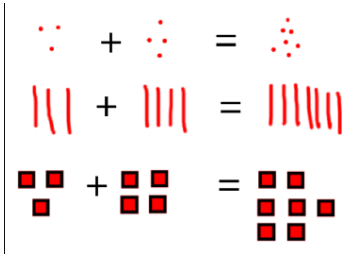
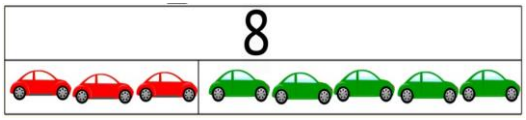
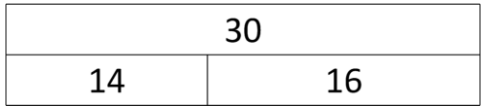
Y2 facts

Y1/2

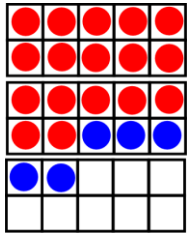
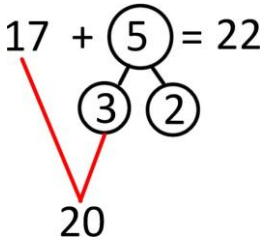
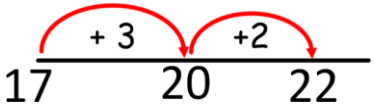
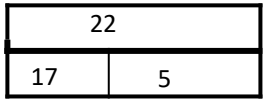
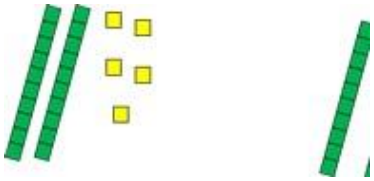
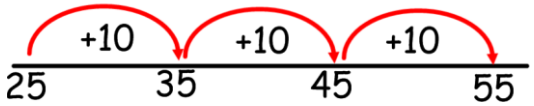
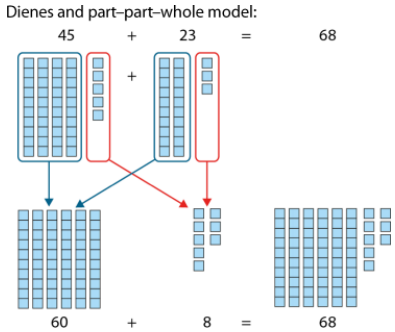
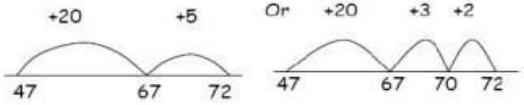
ADDITION + SUBTRACTION -

+	0	1	2	3	4	5	6	7	8	9	10
0	0 + 0	0 + 1	0 + 2	0 + 3	0 + 4	0 + 5	0 + 6	0 + 7	0 + 8	0 + 9	0 + 10
1	1 + 0	1 + 1	1 + 2	1 + 3	1 + 4	1 + 5	1 + 6	1 + 7	1 + 8	1 + 9	1 + 10
2	2 + 0	2 + 1	2 + 2	2 + 3	2 + 4	2 + 5	2 + 6	2 + 7	2 + 8	2 + 9	2 + 10
3	3 + 0	3 + 1	3 + 2	3 + 3	3 + 4	3 + 5	3 + 6	3 + 7	3 + 8	3 + 9	3 + 10
4	4 + 0	4 + 1	4 + 2	4 + 3	4 + 4	4 + 5	4 + 6	4 + 7	4 + 8	4 + 9	4 + 10
5	5 + 0	5 + 1	5 + 2	5 + 3	5 + 4	5 + 5	5 + 6	5 + 7	5 + 8	5 + 9	5 + 10
6	6 + 0	6 + 1	6 + 2	6 + 3	6 + 4	6 + 5	6 + 6	6 + 7	6 + 8	6 + 9	6 + 10
7	7 + 0	7 + 1	7 + 2	7 + 3	7 + 4	7 + 5	7 + 6	7 + 7	7 + 8	7 + 9	7 + 10
8	8 + 0	8 + 1	8 + 2	8 + 3	8 + 4	8 + 5	8 + 6	8 + 7	8 + 8	8 + 9	8 + 10
9	9 + 0	9 + 1	9 + 2	9 + 3	9 + 4	9 + 5	9 + 6	9 + 7	9 + 8	9 + 9	9 + 10
10	10 + 0	10 + 1	10 + 2	10 + 3	10 + 4	10 + 5	10 + 6	10 + 7	10 + 8	10 + 9	10 + 10

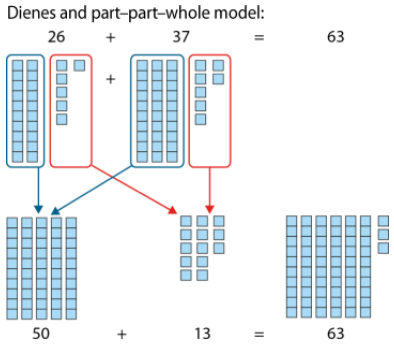
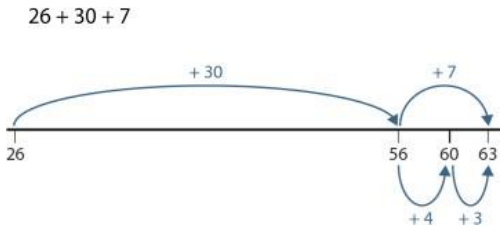
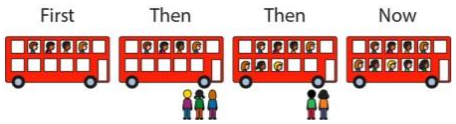
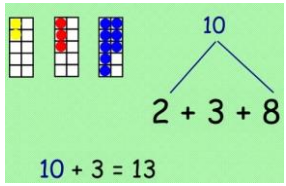
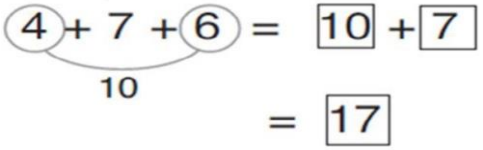
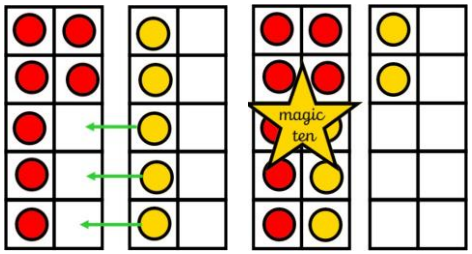
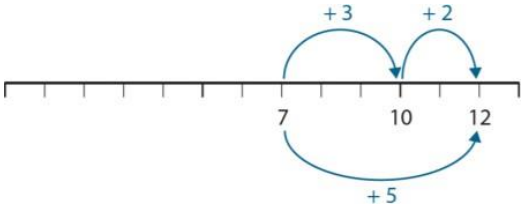
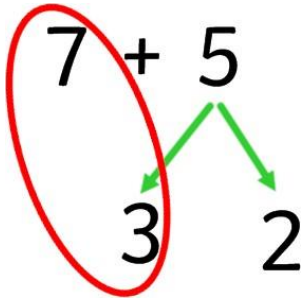
Y2 ADDITION +

Objective & Strategy & Key Vocabulary	Concrete	Pictorial	Abstract
Adding multiples of ten	50= 30 + 20  Model using dienes and bead strings	 ___tens and ____tens makes____tens Use representations for base ten.	20 + 30 = 50 70 = 50 + 20 40 + □ = 60 □ + 30 = 50
Use known number facts Part part whole	 Children explore ways of making numbers within 20	 20 □ + □ = 20 20 − □ = □ □ + □ = 20 20 − □ = □	□ + 1 = 16 16 - 1 = □ 1 + □ = 16 16 - □ = 1
Using known facts	 	 Children draw representations of H,T and O	3 + 4 = 7 Leads to 30 + 40 = 70 Leads to 300 + 400 + 700 *'3 things and 4 things is always 7 things'*
Bar model	 3 + 4 = 7	 3 + 5 = 8	 14 + 16 = 30

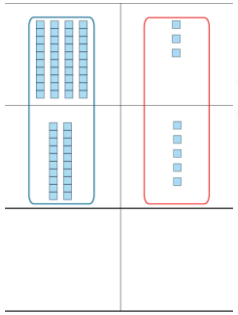
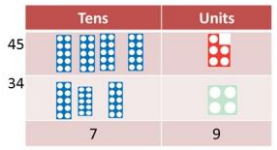
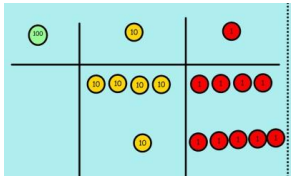
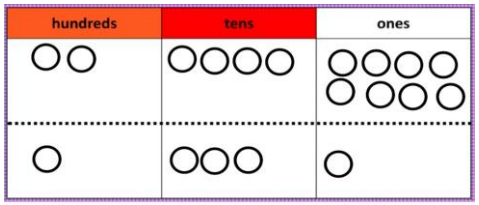
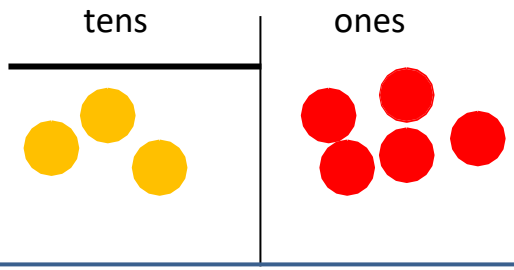
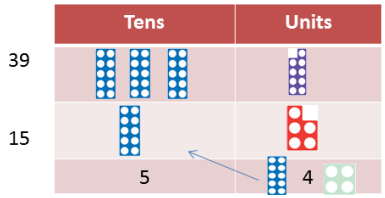
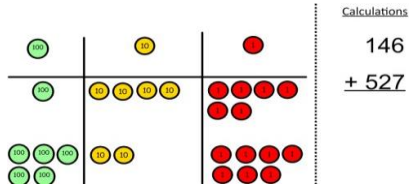
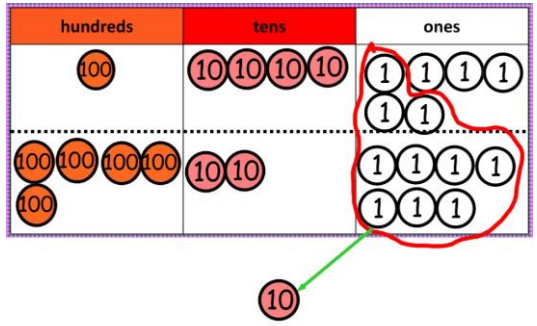
Y2 ADDITION +

Objective & Strategy & Key Vocabulary	Concrete	Pictorial	Abstract
Add a two digit number and ones	 17 + 5 = 22 Use ten frame to make 'magic ten Children explore the pattern. 17 + 5 = 22 27 + 5 = 32	Use part part whole and number line to model.  	17 + 5 = 22  Explore related facts 17 + 5 = 22 22 = 17 + 5 5 + 17 = 22 22 = 5 + 17 22—17 = 5 17 = 22 - 5 22—5 = 17 5 = 22 - 17
Add a 2 digit number and tens	 25 + 10 = 35 Explore that the ones digit does not change	25 + 30 = 55 	27 + 10 = 37 27 + 20 = 47 27 + □ = 57 □ + 30 = 67
Add two 2-digit numbers without bridging. 'Friendly numbers'	Model using dienes , place value counters and numicon 	 Use number line and bridge ten using part whole if necessary.	25 + 47 20 + 5 40 + 7 20 + 40 = 60 5+ 7 =12 60 + 12 = 72

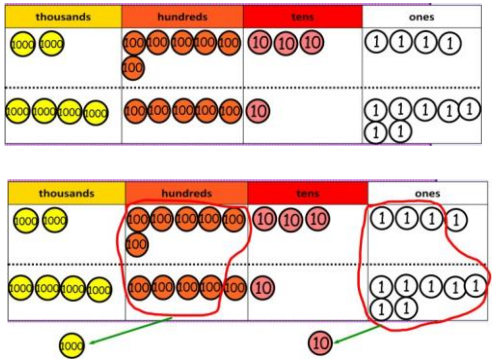
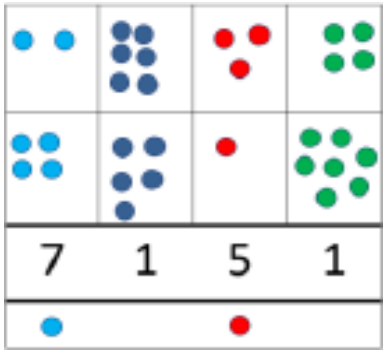
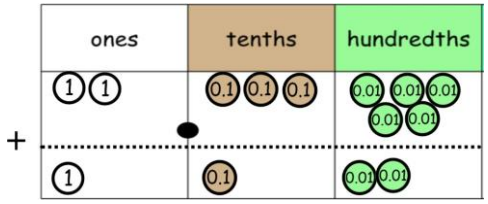
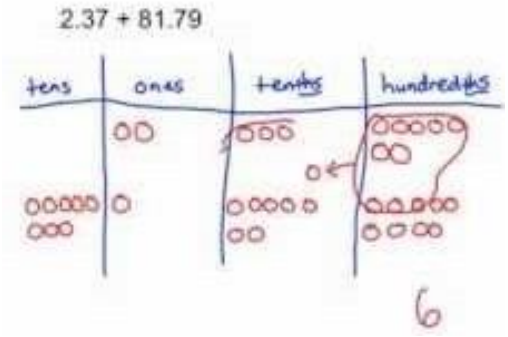
Y2 ADDITION +

Objective & Strategy & Key Vocabulary	Concrete	Pictorial	Abstract
Add any two 2-digit numbers			$24 + 38 = \square$ $\quad 29 + \square = 51$ $38 + 24 = \square$ $\quad \square + 22 = 51$
Add three 1-digit numbers	 Combine to make magic 10 first where relevant, or bridge 10 then add third	Use language of fist, then, then, now Pictorial:  Use part part whole to show magic ten 	 Combine the two numbers that make/ bridge ten then add on the third.
Adding two numbers that bridge 10.	 Use double sided counters and ten frames. Move counters to fill the ten frame and make Magic 10	 Show on a number line how 5 is portioned into adding three, then adding 2.	

Y3 ADDITION +

Objective & Strategy Key Vocab	Concrete When moving from concrete to pictorial, show concrete alongside pictorial. Show pictorial alongside abstract when moving to abstract.	Pictorial	Abstract
Column Addition—no regrouping (friendly numbers) Add two or three 2 or 3-digit numbers.	Model using Dienes or numicon   Add together the ones first, then the tens.  Move to using place value counters	Children move to drawing the counters using a tens and one frame.  3 7 9  	$\begin{array}{r} 248 \\ +\ 131 \\ \hline 379 \\ \hline \end{array}$ Add the ones first, then the tens, then the hundreds.
Column Addition with regrouping. Use language of *'take and make'* to describe carrying	 Exchange ten ones for a ten. Model using numicon and pv counters.  Calculations 146 + 527	Children can draw a representation of the grid to further support their understanding, carrying the ten **underneath** the line.  6 7 3	Use expanded method ONLYWHEN NEEDED $\begin{array}{rcrl} 20 & + & 5 & \\ 40 & + & 8 & \\ \hline 60 & + & 13 & = 73 \end{array}$ Start by partitioning the numbers before formal column to show the exchange. $\begin{array}{r} 536 \\ +\ 85 \\ \hline 621 \\ \hline 1\ 1 \end{array}$

Y4-6 ADDITION +

Objective & Strategy & Key Vocabulary	Concrete	Pictorial	Abstract
Y4—add numbers with up to 4 digits	Children continue to use dienes or pv counters to add, exchanging ten ones for a ten and ten tens for a hundred and ten hundreds for a thousand. 	 Draw representations using pv grid.	2634 + 4517 7141 1 1 Continue from previous work to carry ones, tens and hundreds. Relate to money and measures.
Y5—add numbers with more than 4 digits. Add decimals with 2 decimal places, including money.	As year 4  Introduce decimal place value counters		22,634 + 15,673 38,307 1 1 £127.67 +£ 38.45 £166·12 1 1 1
Y6—add several numbers of increasing complexity Including adding money, measure and decimals with different numbers of decimal points.	Some children may need to use manipulatives and/or representations for longer. See year 5		89,472 63,673 + 3,016 156,161 1 1 1 1 Insert zeros for place holders. 1.837 0.600 +3.920 4.657 2