

Subtraction Progression

Stage 1

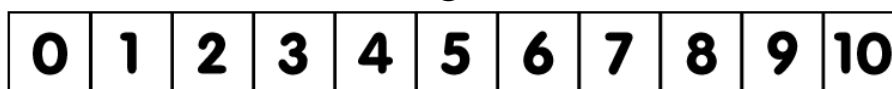
Mark making

Pictorial recording



Number tracks (1 / 2 less...)

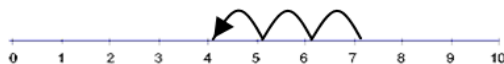
Practical - objects (teddies, counters etc).



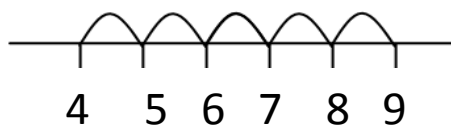
Stage 2

Use of number lines (with numbers/ with divisions/ begin to draw own lines)

$$7 - 3$$



$$9 - 5$$



Use of the hundred square for 2 digit-1 digit and 2 digit - 2 digit

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Understand 'difference' as comparison of 2 sets (how many more/ less?)



Use numicon
Model on a number line

Stage 3

Empty Number Lines
Partitioning

Place value counters
Diennes

$$78 - 35$$

= 43

leading to

Partition:

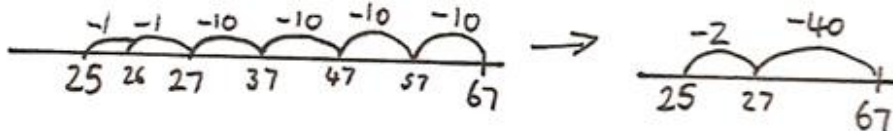
$$52 - 28 = 52 - 20 - 8$$

$$= 32 - 8$$

$$= 24$$

$$67 - 42$$

leading to

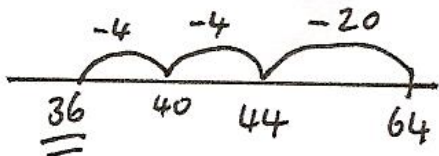


Supporting strategies

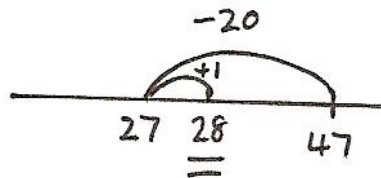
Bridging through 10/ 100

Rounding and adjusting

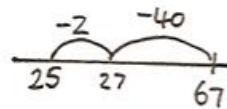
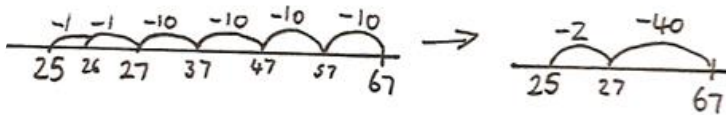
$$64 - 28$$



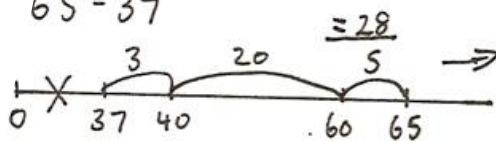
$$47 - 19$$



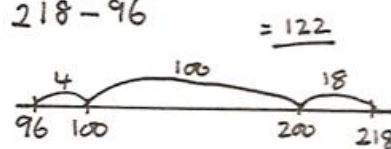
$$67 - 42$$



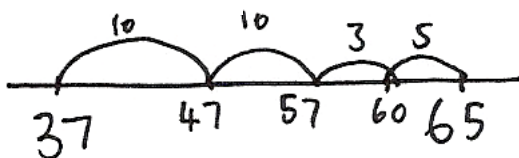
$$65 - 37$$



$$218 - 96$$



or



Finding the difference

Stage 4

Record subtraction calculations that do not require decomposition in columns to support place value and prepare for formal written methods of calculations.

$$\begin{array}{r} 64 \\ - 12 \\ \hline 52 \end{array}$$

Place value counters
Diennes

Where appropriate place value columns are labelled T O to remind children of the value of each of the digits.

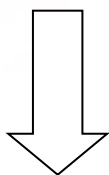
Stage 5

Place value counters
Diennes

Partitioning and decomposition, initially modelled by base 10/diennes.

$$33 - 18 = 15$$

$$452 - 179 = 273$$



Demo as partitioned in columns and link to column subtraction with decomposition.

$$\begin{array}{r} 80 + 4 \\ - 30 + 7 \\ \hline \end{array} \rightarrow \begin{array}{r} 70 + 14 \\ - 30 + 7 \\ \hline 40 + 7 \end{array} \rightarrow \begin{array}{r} 7 \quad 1 \\ \cancel{8}4 \\ \cancel{3}7 \\ \hline 47 \end{array}$$

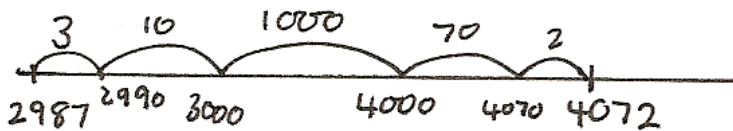
Vocabulary
You 'exchange' one of the 8 tens for 10 ones.
Refer to subtracting the tens by saying 70 subtract 30 or 7 tens take away 3

Stage 6

Continue to use the number line to find the difference when:

- a) The numbers are close together
- b) The higher number contains zeros and/ or other lower value digits (eg subtracting from money)
- c) The numbers are near to multiples of 10/100 etc

$$4072 - 2987 = 1085$$



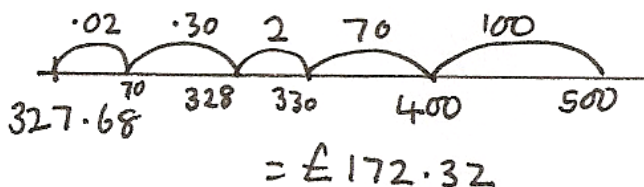
Apply to decimal numbers-

$$\begin{array}{r} 37.42 \\ -16.70 \\ \hline 20.72 \end{array}$$

Zeros can be added as place holders

Put d.p. into total box first

$$£500.00 - £327.68$$



$$= £172.32$$

