Number Word Sequences from 2s, 10, 5s, 3s, and 4.

Numerals 1-1000

Purpose – To develop facility with forward and backward number word sequences in the range 1-1000.

Purpose – To develop knowledge of numerals and number sequences in the range 1-1000.

Incrementing by 10s and 1s

Purpose – To develop the facility to increment and decrement numbers by 10s and 1s in the range 1-100.

Purpose – To develop the facility to add numbers in the range 1-9 and from decade numbers, and to subtract numbers in the range 1-9 to and from decade numbers.

Adding and Subtracting to 20, using 5 and 10

Purpose – to develop facility with addition and subtraction in the range 1-20, using grouping by 5 and 10.

The PROCEDURES INVOLVE USING THE ARITHMETIC RACK

Building numbers 6-10.

Building numbers 6-10. Place 5 beads on the upper row. Move 1 more on the upper row. How many altogether?

Purpose – To develop the facility to increment and decrement numbers by 10s and 1s in the range 1-9 to and from decade numbers.

Adding from a decade:

Place out 4 tens. How many tens are there? How many ones are there now? (40) Place 4 ones. How many ones are there now? (44) Briefly display and then screen 3 tens. How many tens are there? How many ones is that? (30) Place 6 ones under the screen. How many ones are there now? (36) Check. Continue with similar examples.

Subtracting to a decade:

Place out 7 tens and 6 ones. How many tens are there? How many ones are there now? (76) Remove the 6 ones. How many are there now? (70) Briefly display and then screen 8 tens and 3 ones. How many tens are there? How many ones are there now? (70) Continue with similar examples.

Determining the number in partially screened equal groups:

Building numbers 6-10. Place 5 beads on the upper row. Move 1 more on the upper row. How many altogether?

Purpose – to develop facility with early multiplicative and divisional strategies.

SVNs and BNWs’s by 2s:

These pages are designed as quick reference guide to the teaching phase detailed in pages 167-203 of Teaching Number: Advancing Children’s Skills and Strategies ISBN 1-4129-2185-6. Please refer to the book for more detailed information.
Sequence 3 digit numerals: Place out the following numeral cards; 207, 217, …, 297 in random order. Put these cards in order from left to right. Read the numbers from left to right. Similarly for other sets of cards for example: 362, 372, …, 452, 46, 414, …, to 946, 92, 92, …, to 112.

Adding to a decade: 6-9: Place out five complete ten frames (10 dots) and a ten frame (2 dots). How many dots altogether? How many more to make 60? Briefly display and screen two complete ten frames (10 dots) and a ten frame (4 dots). How many dots are there altogether? How many more to make 30? Continue with similar examples.

Doubles plus or minus 1: Make a group of 3 on the lower row. Can you work it out in your head using a double? Now move another 3 over on the upper row and 3 back on the lower row. How many are 4 and 3? Repeat with 4 and 5 on the bottom. Similarly for 2×1, 1×2, …, 4×5, 5×4. Repeat in random order.

Make a group 8 on the upper row. Make a group of 7 on the lower row. Can you work it out in your head using a double? Now move another 2 over on the upper row and 2 back on the lower row. How many are 8 and 7? Repeat with 7 on the top and 8 on the bottom. Similarly for 6×5, 5×6, …, 10×9, 9×10 Repeat in random order.

Determining the number in a Screened Array: Briefly display and then screen a 7 × 3 array. Unscreen one row. There are seven rows altogether. How many dots are there altogether? Similarly the following arrays: 4×2, 4×3, 6×5, etc.

Subtracting from a decade: 6-9: Place out four complete ten frames (10 dots). How many dots are there? Screen 6 dots on one of the ten frames. I have taken away 7 dots. How many are there now? Briefly display and then screen three complete ten frames (10 dots). How many dots are there? Ask the child to look away whilst double screening seven dots under the screen. I have taken away 7 dots. How many dots are there now? Check to see if you are correct. Continue with similar examples.

Addition by going through 10: Move over 9 on the upper row and 2 on the lower. Now move over 1 on the upper and move back 1 on the lower. How many are 9 and 2? Similarly for 9+3, 9+4, …, 9+9. Repeat with 8 on the top. Repeat with 7 on the top.

Determining the number of Rows: Briefly display and then screen a 4×3 array. Unscreen one row. There are 12 dots altogether. How many rows are there? Similarly using the following arrays: 6×2, 8×3, 3×4, etc.

Commutativity of Addition: Move over 2 on the upper row and 5 on the lower row. Read the numbers on each row. Now move 3 more over on the upper row and 3 back on the lower row. Now read the numbers in each row. What do you notice? Similarly with 4 and 5, 3 and 7, and so on

Addition by compensation: Move over 7 on the upper row and 9 on the lower row. Read the numbers on each row. Now move 3 more over on the upper row and 3 back on the lower row. Now read the numbers in each row. What is 7 add 9? Similarly for 6×8, 4×6, 9×7, etc.

Subtraction by going through 10 Move over 10 in the upper row and 3 on the lower row. What number is that? Take away 4 from 13. Take 3 in the lower row and 1 on the upper row? How many are left? Similarly for 15-7, 12-3, 12-4, etc.

These pages are designed as quick reference guide to the teaching phase detailed in pages 167-203 of Teaching Number: Advancing Children’s Skills and Strategies ISBN 1-4129-2185-6. Please refer to the book for more detailed information.