

HOW TO TEACH ADDITION.

1. Show how to add by tens thus, 10, 20, 30, 40, etc.; 15, 25, 35, 45, etc.; 19, 29, 39, 49, etc. The extension columns can be used with advantage to show this. Direct attention to the fact that a number increased by 10 never changes the right hand figure.

2. Teach the left hand column of the Addition Table from top to bottom, thus, 1 and 1 are 2; 2 and 2 are 4; 3 and 3 are 6, etc.

3. Ask the pupil how many 9 is less than 10; then show that if 17 and 10 are 27, 17 and 9 must be 26 or 1 less than 27, because 9 is 1 less than 10. Show that when 9 is added to any number the right hand figure is DECREASED by one while the figure towards the left is INCREASED by one, with the exception of such numbers as 9 and 10; 9 and 20, etc., which will present little difficulty. In counting by 9s, say up to 90, thus, 9, 18, 27, 36, 45, etc., it will be interesting to point out that the right hand figures are 9, 8, 7, 6, 5, 4, 3, 2, 1, 0, while the left hand figures are 0, 1, 2, 3, 4, 5, 6, 7, 8, 9.

Let the teacher ask (pointing to figures in table) How many are 4 and 4? Pupil 8. T., 8 and 8? P., 16. T. (pointing to extension columns) 16 and 6 (no answer) T, How many are 6 and 6? P, 12 T, What is the right hand figure of 12? P, 2 T, Then 16 and 6 are 22. Again: T, 26 and 6? Pupil (not sure yet) T, How many are 6 and 6? P, 12 T, Then if 6 and 6 are 12 and 16 and 6 are 22, how many are 26 and 6? The pupil sees it and says 32. Again: T, 8 and 8? P, 16 T, 28 and 8? P, 36 T, 7 and 7? P, 14 T, 47 and 7? P, 54, etc. Show that in all cases the right hand figure in 28 and 8 is the same as in 8 and 8; in 7 and 7 the same as in 47 and 7, and so on.

Having mastered this the next step is 7 and 7? P, 14 T, 7 and 8? P, 15 T, What is the right hand figure of 15? P, 5 T, Then how many are 17 and 8? You said 7 and 8 were 15 and that the right hand figure was 5; then 17 and 8 must have a 5 for a right hand figure. It cannot be 15 for that is LESS than 17, and it cannot be 35 for 17 and 10 would only make 27, and 8 is less than 10, therefore you see it must be 25. Add 8 to each of the numbers ending in 7 in the extension column. Proceed similarly with any other number.

4. For review exercises run over any, or all, of the numbers in the Table downwards, upwards, forwards, backwards. Then add the number to any number in the extension columns as quickly as it is named or pointed out.

5. Learn to count rapidly by adding any number continuously to itself or to any number less than itself. Thus with 3: 1, 4, 7, 10, etc.; 2, 5, 8, 11, etc.; 3, 6, 9, 12, etc.