		3													
, ,	12 3) 4 1	6	33	30	27	24	18	9	3	15	21	36			
³{`	4	2	11	10	9	8	6	3	1	5	7	12			
	1	2	3	4	5	G	7	8	9	10	11	12			
							4								
٠,٢.	4	8	12	16	20	24	28	32	36	40	44	48			
4 4 4	1	2	3	4	5	6	7	8	9	10	11	12 7			
•	11	9	8	2	1	5	4	10	12	3	6	7			
							4								
.\$.	44	36	32	8	4	20	16	40	48	12	24	28			
^ ^3	44 11	9	8	2	1	5	4	10	12	3	6	7			
	ıd so														

Directions how to train them on each lesson.

1. First, go successively over the figures or numbers with them from left to right, and from right to left; and then take figures and products here and there. Continue the training till the mind gets hold on products, every way required.

2. In giving quotients, proceed in the same way,—from left to right—from right to left,—and here and there—till answers are readily obtained.

3. Then, take the multiplying and dividing processes; and make them prove results by multiplying, dividing, adding and subtracting. Continue thus analyzing and synthetizing results till every thing about the lesson is well understood.—Ex. Show how many threes are in 24 by adding? Ans. 3, 3, 3, 3, 3, 3, 3, 3, 3 = 24, or 8, 8, 8=24. Show this by subtraction? Ans. 24—3—3—3—3—3—3—3—3—3—3—3—3—3—4—8—8=0. Begin with 3, and add one three after another till you have 24; then count how many threes you had to take. When you added five threes, tell the sum? ans. 15. How many threes more to make the 24? ans. three threes. Add three threes to 15, and from it subtract three threes. What numbers would you have? ans. 24—6. Tell me the difference between these two numbers; ans. 18. Tell the half and the third of 18? ans. 9 and 6.

4. Then make them read off, without any hesitation, successively, products and quotients—additions and differences, till impressions are well deepened in their minds. And as you are going on with the work of training, be studying, how to test their growing knowledge of every exercise, and that you are carrying their understanding along with you.

5. Before passing to a new lesson, make them read products, &c., &c., off,—naming only the results of processes—allowing them to use no words, as 5 times 7 are 35; 6 times 3 are 18; but 35, 18, &c., &c., results blotted out, the figures to be worked only seen, or named: for example,—

8	9	7	4	5	10	11	12						
•	٠	•	•	•	•	•	* Products						
66	"	"	"	"	"	"	" Quotients (1)						
a s	a 8	u 8	a. 8	a	a 8	a 8	a Additions s Subtractings						

N. B.—Wait not to write results, just make them name answers, and race on.

In training them use both the slate and the blackboard. When in classes, make them in turn train each other; and on seats, two and two can alternately train each other. Give the figures to be worked with special directions how to drift; and a little practice will make them expert in exercising and testing each other. On themselves it has an excellent effect. It quickens and stirs up their minds; it leads to emulation, and its whole tendency is to develop and strengthen the powers of the mind. One week of such training is of more value in giving them a knowledge of figuring than months of the individual working of cums,— requiring of them no more than merely the answer of a sum or question. In this there is no training whatever. It is the tedious wading through process to a result. And if the result be found correct—though after many goings over and corrections—no more is required. Can this be training to excellency in acquiring a knowledge of figures and figuring?

When an exercise is given to be worked by them individually on seats, let it be with strict injunction to train themselves on the work so as to master the process; and so study the different steps of the work as to be prepared for your own interrogations.

To be satisfied with answers merely at this stage especially, is not only a slow,—it is indeed the slowest way to ground children in the fundamentals of arithmetic. And instead of quickening and healthfully spurring on their minds to intelligent efforts, its tendency is rather to make them dull, and inergetic, and to create a dislike to schoolwork.

going on with the work of training, be studying, how to test their growing knowledge of every exercise, and that you are carrying times. And make each line an exercise for multiplying, adding, their understanding along with you.

Table.—For multiplying and dividing, adding and subtracting — all combined.

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23 + ×	2 ÷	3+ *	3 ÷	4+ ×	4 ÷	5+ ×	5 ÷	×+9	÷ 9	7 + ×	+ 4	8+ ×	÷ 8	8 + ×	÷ 6	10 + ×	10 ÷	11+×	11 ÷	12 ÷ ×	12 ÷	Quo.
2	4	2	6	2	8	2	10	2	12	2	14	2	16	2	18	2	20	2	22	2	24	2
3	6	3	9	3	12	3	15	3	18	3	21	3	24	3	27	3	30	3	33	3	36	3
4	8	4	12	4	16	4	20	4	24	4	28	4	32	4	36	4	40	4	44	4	48	4
5	10	5	15	5	20	5	25	5	30	5	35	5	40	5	45	5	50	5	55	5	60	5
6	12	6	18	6	24	6	30	6	36	6	42	6	48	6	54	6	60	6	66	6	72	6
7	14	7	21	7	28	7	35	7	42	7	49	7	56	7	63	7	70	7	77	7	84	7
8	16	8	24	8	32	8	40	8	48	8	56	8	64	8	72	8	80	8	88	8	96	8
9	18	9	27	9	36	9	45	9	54	9	63	9	72	9	81	9	90	9	99	9	108	9
10	20	10	30	10	40	10	50	10	60	10	70	10	80	10	90	10	100	10	110	10	120	10
11	22	11	33	11	44	11	55	11	66	11	77	11	88	11	99	11	110	11	121	11	132	11
12	24	12	36	12	48	12	60	12	72	12	84	12	96	12	108	12	120	12	132	12	144	12

⁽¹⁾ Top line to be rubbed out, and quotients given from products.