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Worksheet

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INSTRUCTIONS FOR STUDENT PROGRESS RECORD SHEET

Parents *know* how many words their two-year-old has learned without recording them on a sheet of paper. This knowledge comes from the close, intimate involvement of parent with child.

The lessons in this book have been structured to maximize the teacher's opportunity for close involvement with each student in class. When the students use manipulative materials the teacher can *see* how they think about problems. The individual blackboards used for group responses allow the teacher to know at once who understands and who needs assistance. The teacher's frequent opportunities to serve as a resource for students in problem-solving settings makes knowing how each student is doing as natural for the teacher as knowledge of the child is for the parent.

Written records of each student's progress are generally not needed by a teacher who *knows* the students—such records are more often required by administrators or the child's next teacher. The record sheet on page 327 is designed to show others what progress a student has made. The only progress it records is with respect to the chapters or lessons completed in this book. The record sheet itself cannot be used to compare any child with his or her peers nor can it be used to rate the child in terms of quality of achievement.

It is assumed that each child who has progressed through the sequence of lessons in any one chapter has mastered its skills. As long as the teacher has paced the lessons in the chapter according to the students' ability to absorb them, regardless of grade level, there should be no need for the next teacher to repeat them in a following year. Therefore, the teacher only needs to know which lessons or chapters the students experienced.

The record sheet that follows contains information only on which chapters or lessons were presented. To satisfy parents', administrators', and future teachers' needs for a specific measure of each child's accomplishments, a folder should be kept containing samples of that child's work in each appropriate area of mathematics, and other areas of the curriculum. The *best* record of a child's progress is the child's own work.

If students are to be allowed to learn at their own rate, any method of recording progress should center on the gains made by each child. All students are capable of learning and pride should be taken in the accomplishments of each; they should not be measured against the potential of someone else.

MAKING A TRANSPARENCY

Each of the worksheets that follows can be used to make a permanent, nonerasable transparency on those copying machines equipped to make transparencies from line drawings.

If a machine is not available, permanent transparencies can be made by tracing the worksheets on clear acetate, using a fine-line permanent-ink marking pen. *Sharpie* brand marking pens work very well for this tracing.

Even permanent marking-pen ink will eventually rub off the acetate if the transparency is in frequent use. To avoid this, it is best to draw the lines on the back of the acetate sheet. In this way, the worksheet lines are not touched when writing and tracing on the front of the completed transparency.

Two difficulties are associated with writing on the back of a sheet of acetate but both are easily overcome. The first is being able to tell which side has been lined. When written symbols, such as numbers or letters, are on the back of a sheet of acetate, they must be written backwards to come out legibly as the transparency is turned over. In such situations, it is easy to tell when the front of the transparency is up, because the words read correctly. In the case of a transparency of, say, graph paper, it is sometimes difficult to tell which side is the front and which is the back. Writing "This Side Up" in a corner on the unlined side of the acetate as soon as the ink dries on the lined side solves the problem.

The second difficulty comes in writing numbers or letters that will come out correctly when they are written on the back of the acetate. To make the transparency come out frontwards, it must be written backwards. Writing backwards can be easily done by reversing the worksheet from which the copy is to be made, too. For example, if the task is to make a transparency of a multiplication matrix, a dittoed copy of the matrix would be turned face down and the acetate sheet placed on the back side of the dittoed sheet. If the numbers do not show through, they can be outlined again with the Sharpie marking pen, and the matrix will be clearly visible turned face down.

STUDENT PROGRESS RECORD SHEET

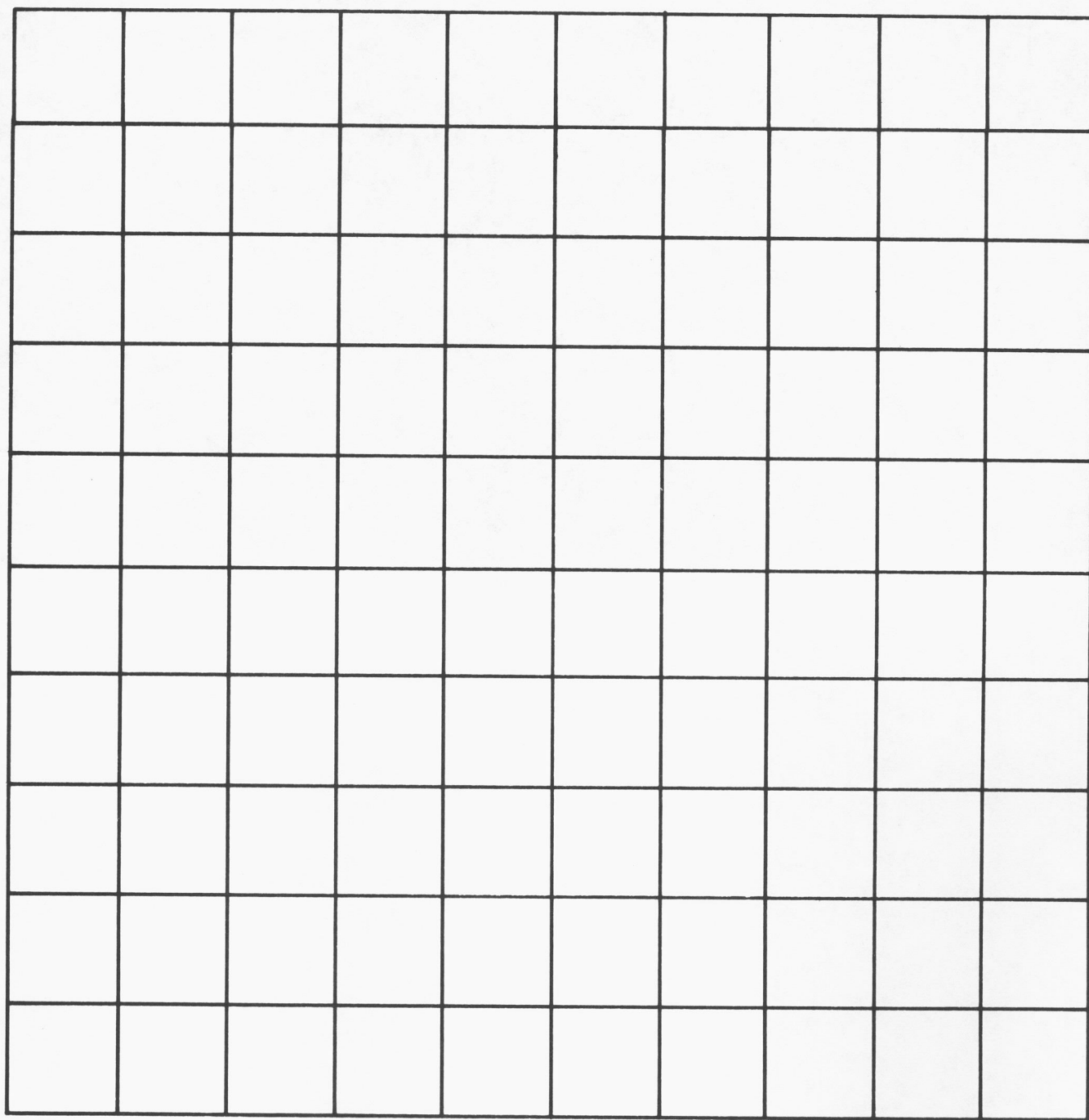
MATHEMATICS . . . A WAY OF THINKING

Student's name _____

Chapter Titles:	(√)	Lesson Number	Comments
Patterns on Number Tables	_____	_____	_____
Patterns with Tiles and Cubes	_____	_____	_____
Beginning Addition and Subtraction	_____	_____	_____
Beginning Multiplication	_____	_____	_____
Beginning Division	_____	_____	_____
People Problems and Word Problems	_____	_____	_____
Advanced Addition and Subtraction	_____	_____	_____
Advanced Multiplication	_____	_____	_____
Advanced Division	_____	_____	_____
Fractions	_____	_____	_____
Decimals	_____	_____	_____
Sorting and Classifying	_____	_____	_____
Measurement	_____	_____	_____
Graphing-Pictorial Representations	_____	_____	_____
Metric Measure	_____	_____	_____
Probability	_____	_____	_____
Coordinate Graphing	_____	_____	_____
Negative Numbers	_____	_____	_____
Tangrams-Logical Thinking	_____	_____	_____

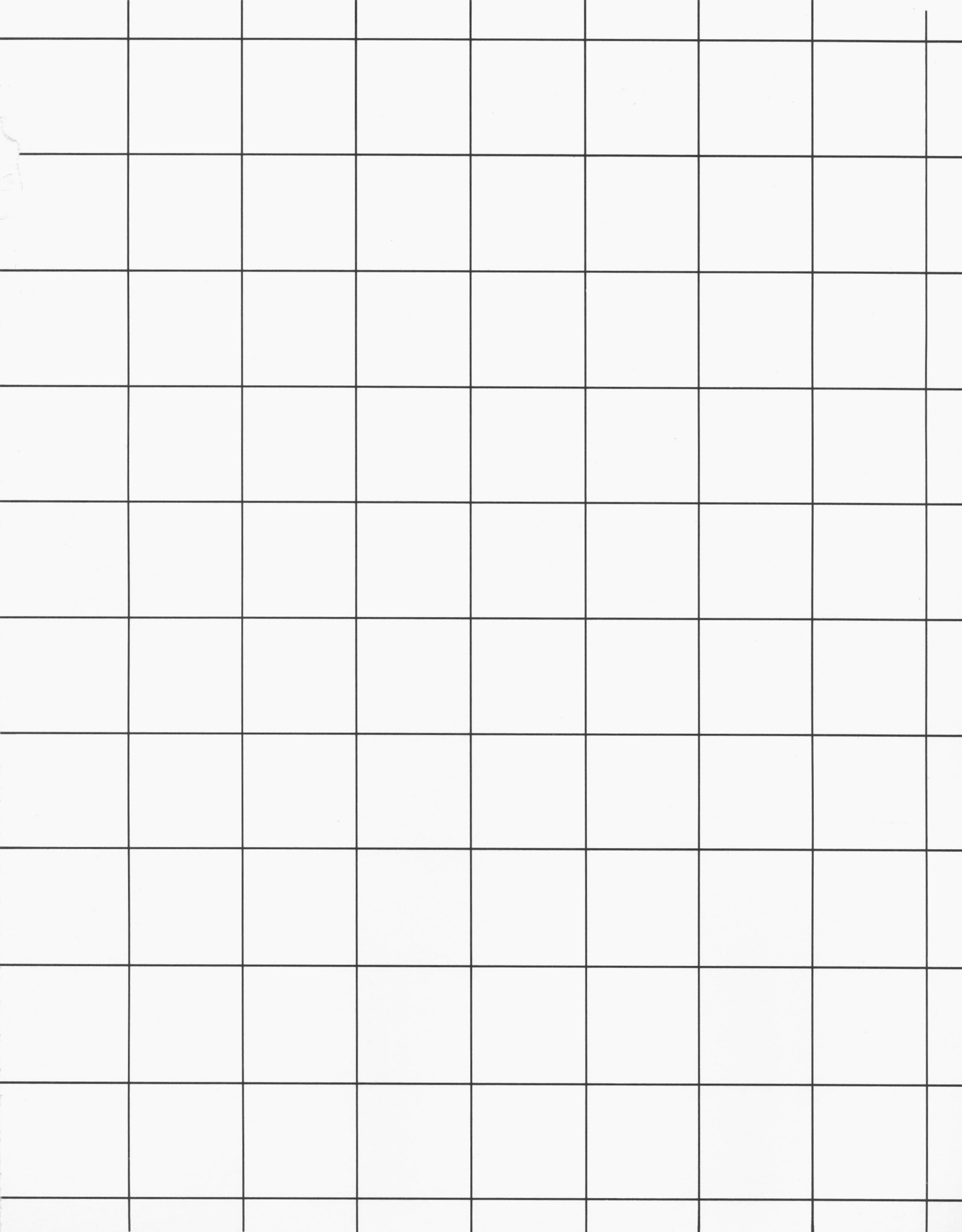
A check mark (√) following a chapter indicates the student completed all the lessons in that chapter.

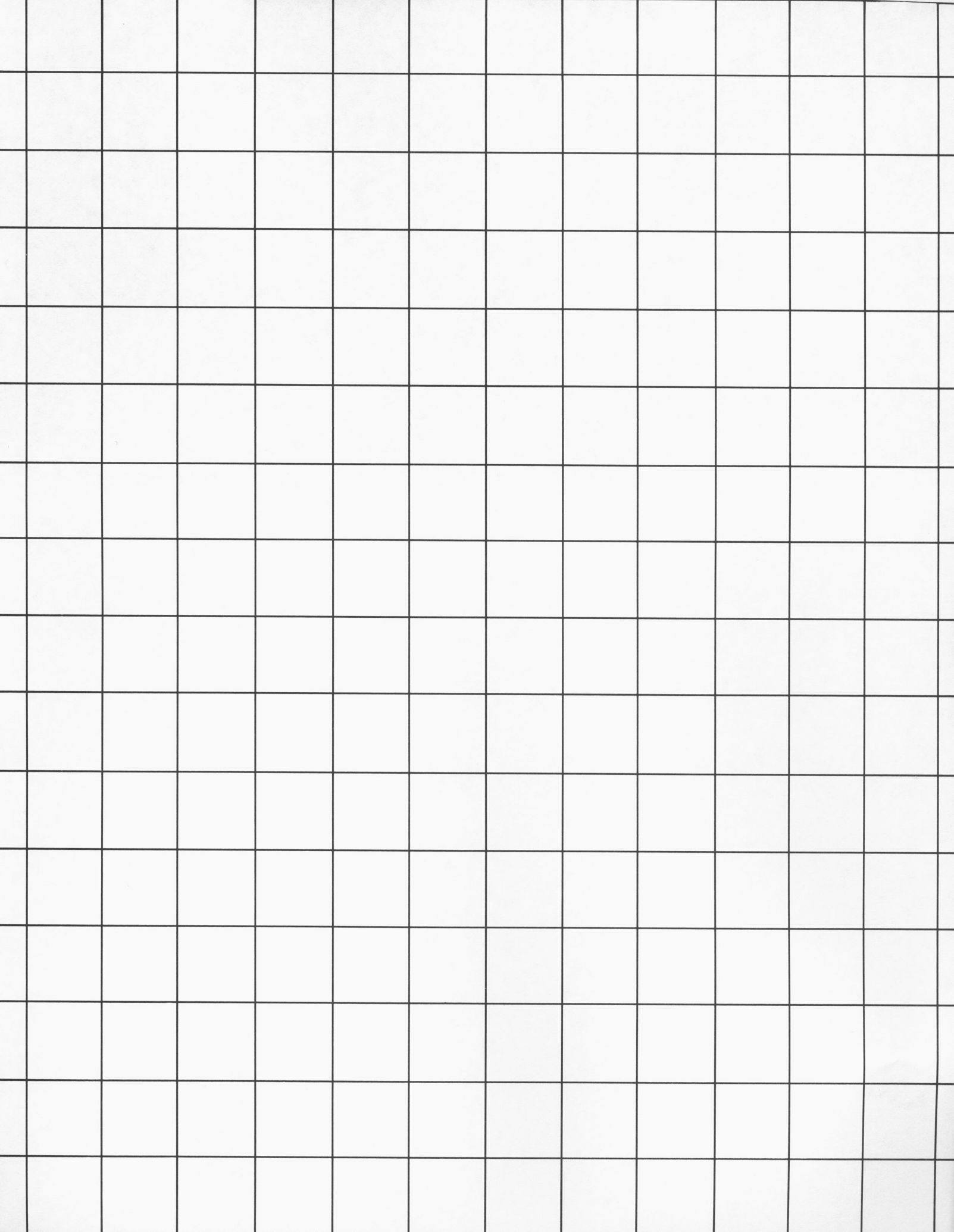
A lesson number (e.g., 9-13) following a chapter indicates the student completed all the lessons in that chapter up to and including the lesson indicated.



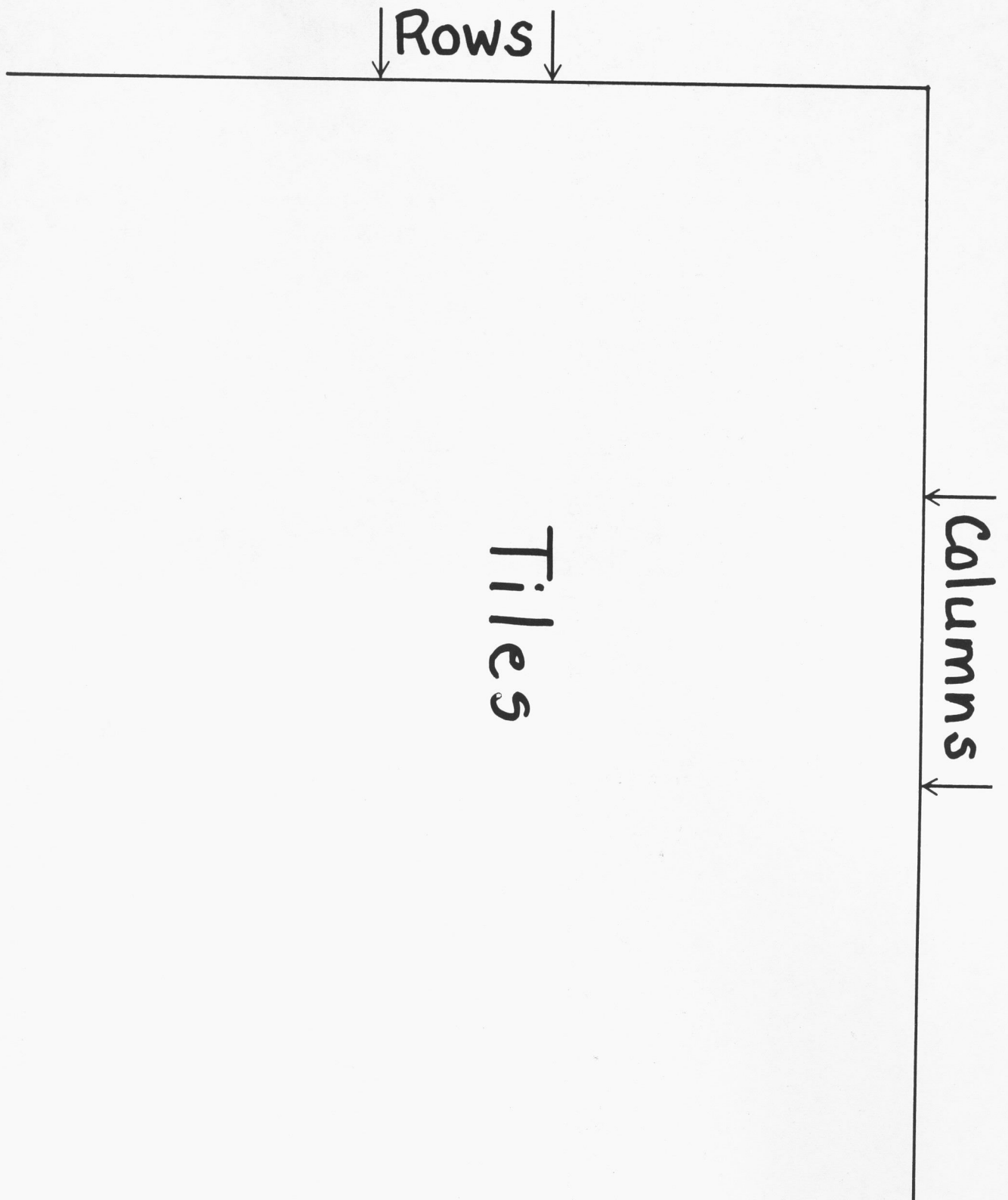
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20	21	22	23	24	25	26	27	28	29
30	31	32	33	34	35	36	37	38	39
40	41	42	43	44	45	46	47	48	49
50	51	52	53	54	55	56	57	58	59
60	61	62	63	64	65	66	67	68	69
70	71	72	73	74	75	76	77	78	79
80	81	82	83	84	85	86	87	88	89
90	91	92	93	94	95	96	97	98	99

133	134	135	136	137	138	139	140	141	142	143	144
121	122	123	124	125	126	127	128	129	130	131	132
109	110	111	112	113	114	115	116	117	118	119	120
97	98	99	100	101	102	103	104	105	106	107	108
85	86	87	88	89	90	91	92	93	94	95	96
73	74	75	76	77	78	79	80	81	82	83	84
61	62	63	64	65	66	67	68	69	70	71	72
49	50	51	52	53	54	55	56	57	58	59	60
37	38	39	40	41	42	43	44	45	46	47	48
25	26	27	28	29	30	31	32	33	34	35	36
13	14	15	16	17	18	19	20	21	22	23	24
1	2	3	4	5	6	7	8	9	10	11	12



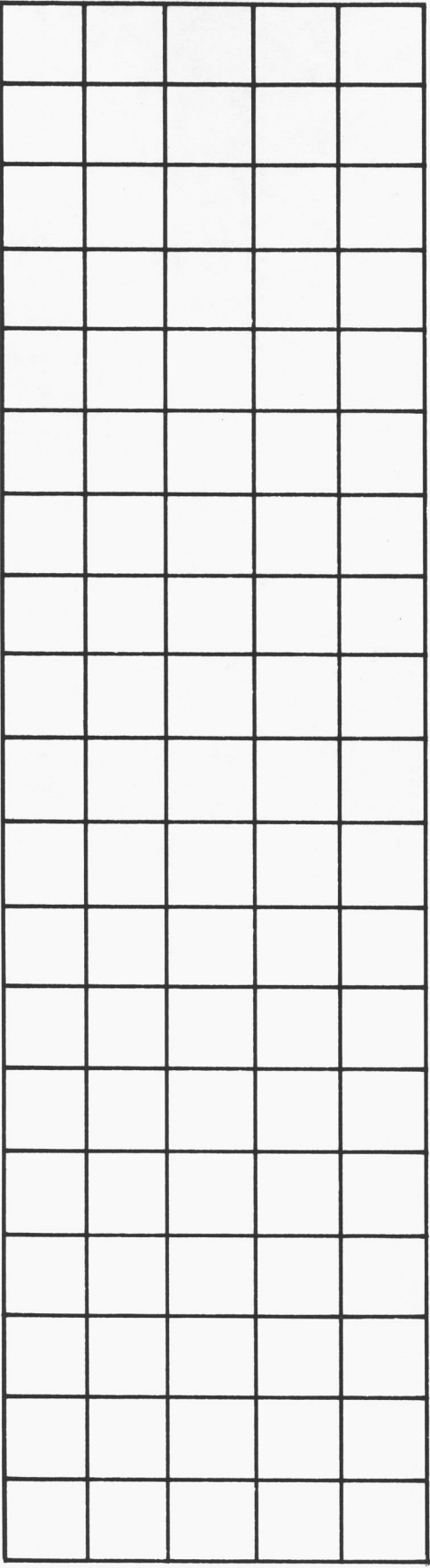
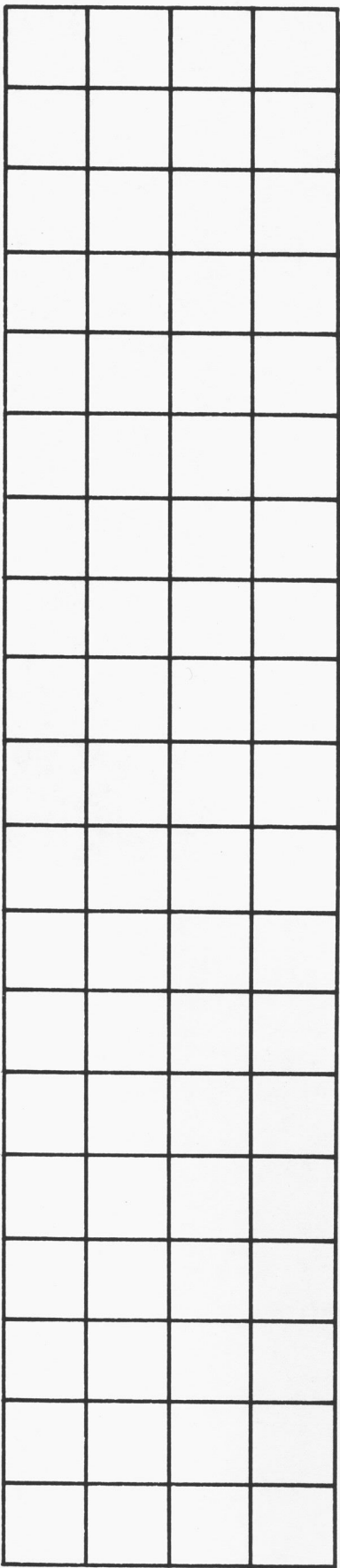






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3	6	9	12	15	18	21	24	27	30
4	8	12	16	20	24	28	32	36	40
5	10	15	20	25	30	35	40	45	50
6	12	18	24	30	36	42	48	54	60
7	14	21	28	35	42	49	56	63	70
8	16	24	32	40	48	56	64	72	80
9	18	27	36	45	54	63	72	81	90
10	20	30	40	50	60	70	80	90	100











[illegible][illegible][illegible][illegible]





[illegible][illegible][illegible]











			





			





			





			





			





			





		
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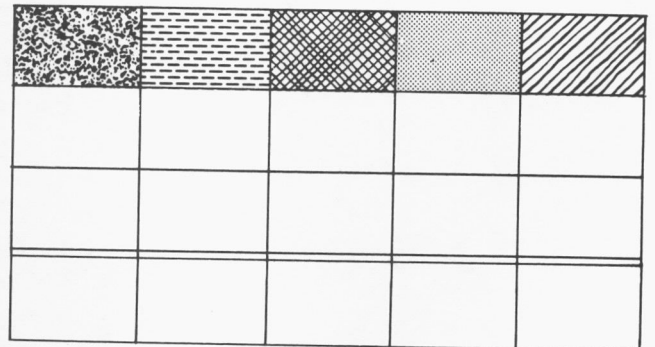
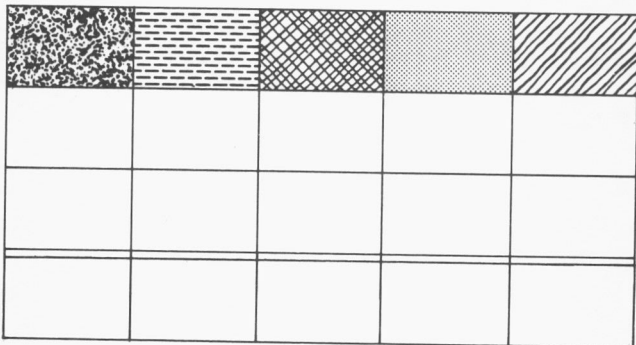
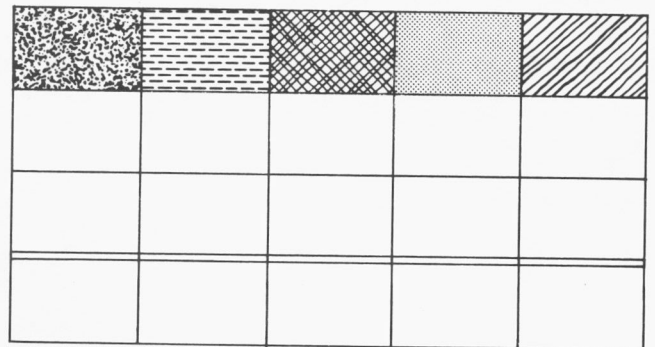
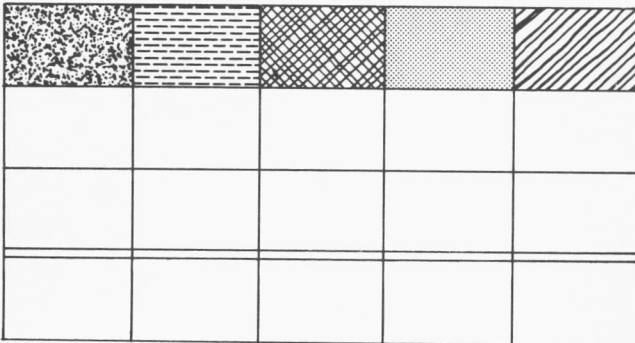
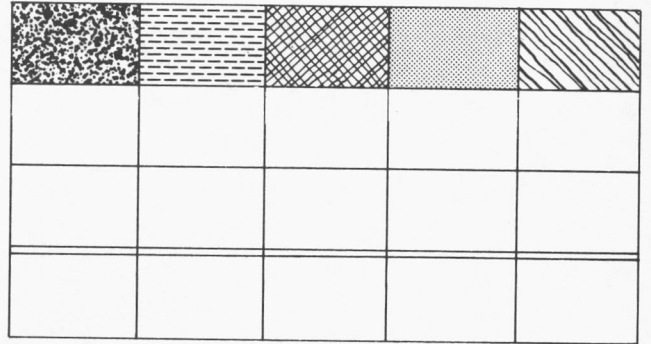
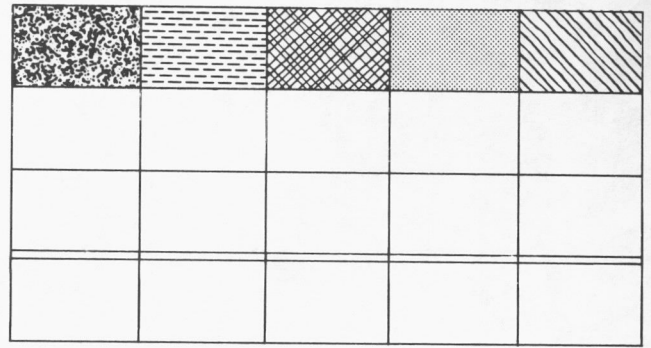
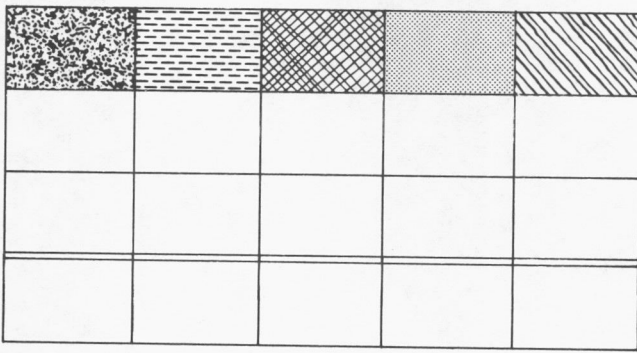
		
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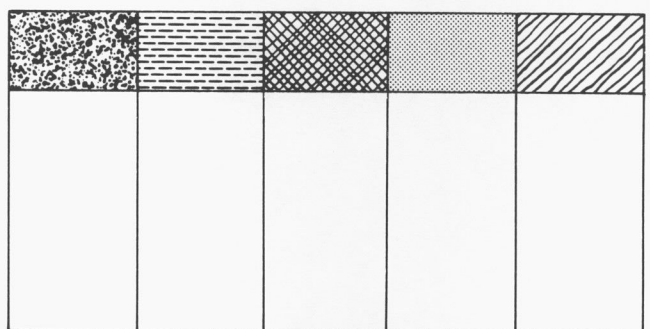
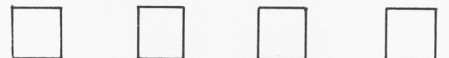
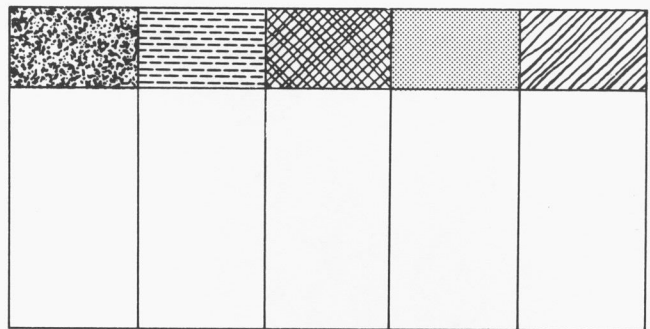
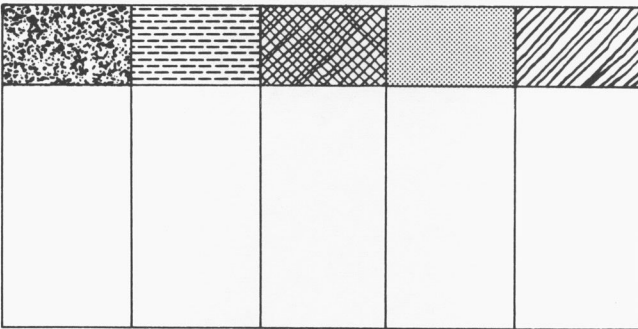
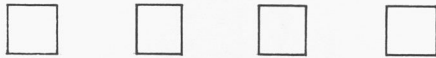
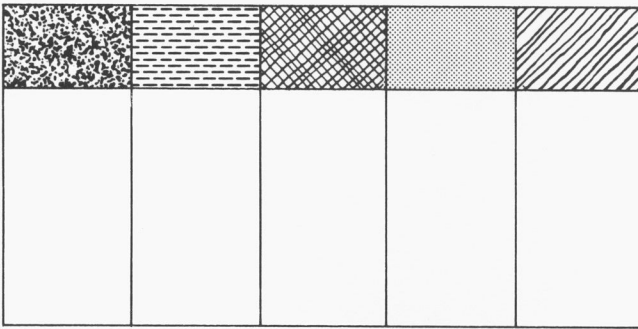
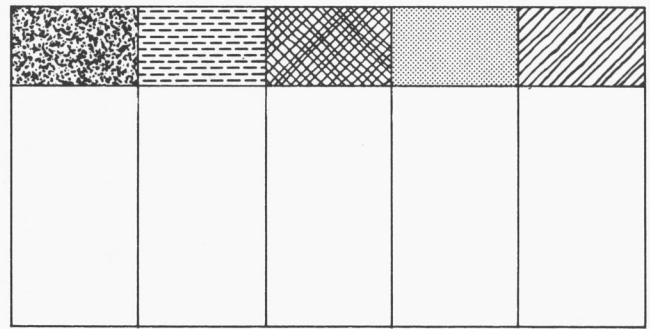
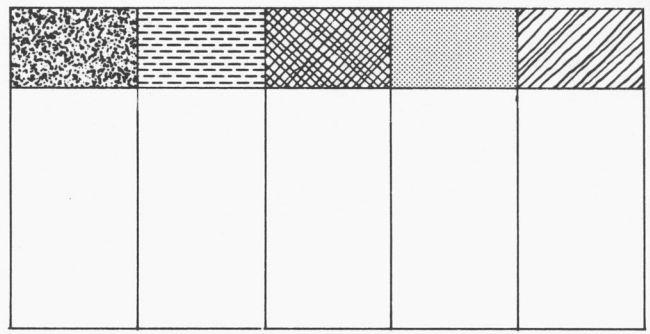
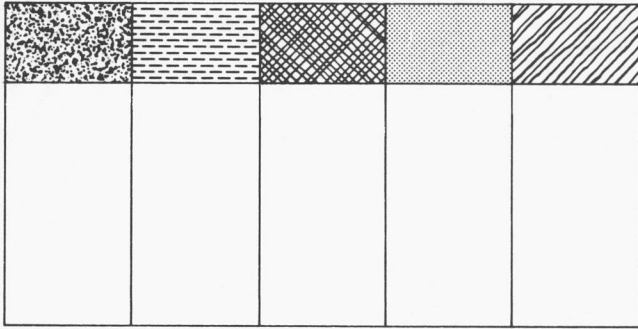
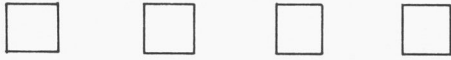
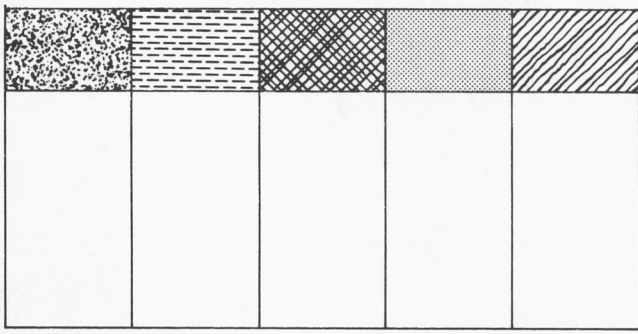
			

		
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9	8	7	6	5	4	3	2	1	0	
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0/9	0/8	0/7	0/6	0/5	0/4	0/3	0/2	0/1	0/0	1
1/8	1/6	1/4	1/2	1/0	0/8	0/6	0/4	0/2	0/0	2
2/7	2/4	2/1	1/8	1/5	1/2	0/9	0/6	0/3	0/0	3
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8/1	7/2	6/3	5/4	4/5	3/6	2/7	1/8	0/9	0/0	9

