

My Thinking Sheet

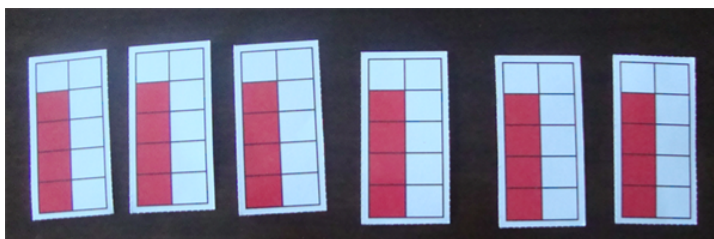
Name: _____

Date: _____

×	1	2	3	4	5	6	7	8	9	10	11	12
1	1	2	3	4	5	6	7	8	9	10	11	12
2	2	4	6	8	10	12	14	16	18	20	22	24
3	3	6	9	12	15	18	21	24	27	30	33	36
4	4	8	12	16	20	24	28	32	36	40	44	48
5	5	10	15	20	25	30	35	40	45	50	55	60
6	6	12	18	24	30	36	42	48	54	60	66	72
7	7	14	21	28	35	42	49	56	63	70	77	84
8	8	16	24	32	40	48	56	64	72	80	88	96
9	9	18	27	36	45	54	63	72	81	90	99	108
10	10	20	30	40	50	60	70	80	90	100	110	120
11	11	22	33	44	55	66	77	88	99	110	121	132
12	12	24	36	48	60	72	84	96	108	120	132	144



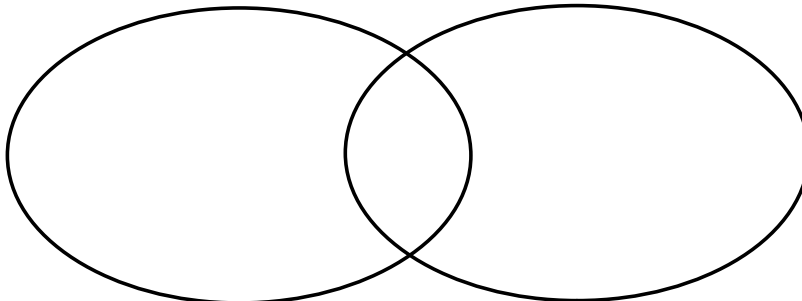
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100



How many ways can you represent this photo?

Communication	Connections	Representation
I used no math language and/or math notation.	I did not notice anything about the problem or the numbers in my work.	I did not use a math representation to help solve the problem and explain my work.
I used some math language and/or math notation.	I tried to notice something, but it is not about the math in the problem.	I tried to use math representation to help solve the problem and explain my work, but it has mistakes in it.
I used math language and/or math notation throughout my work.	I noticed something about my math work.	I made a math representation to help solve the problem and explain my work, and it is labeled and correct.
I used a lot of specific math language and/or notation throughout my work.	I noticed something in my work, and used that to extend my answer and/or showed how this problem is like another problem.	I used another math representation to help solve the problem and explain my work in another way.

Compare and contrast two different representations.



- N4.4 Demonstrate an understanding of multiplication of whole numbers (2- or 3-digit by 1 - digit) by:
- modeling the distributive property
 - using personal strategies for multiplication, with and without concrete materials
 - using arrays to represent multiplication
 - connecting concrete representations to symbolic representations
 - estimating products
 - solving problems.

- N4.5 Demonstrate an understanding of division of whole numbers (1-digit divisor to 2-digit dividend) by:
- using personal strategies for dividing, with and without concrete materials
 - estimating quotients
 - explaining the results of dividing by 1
 - solving problems involving division of whole numbers
 - relating division to multiplication.