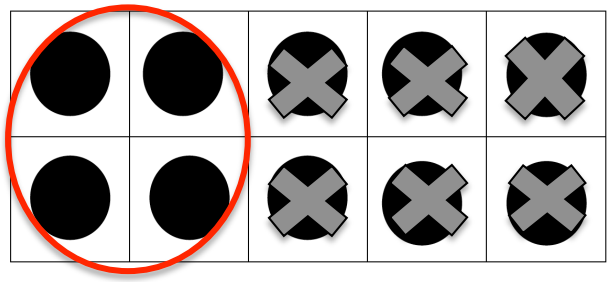
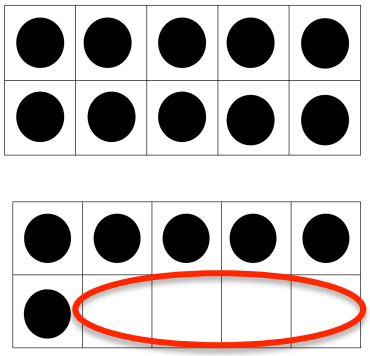
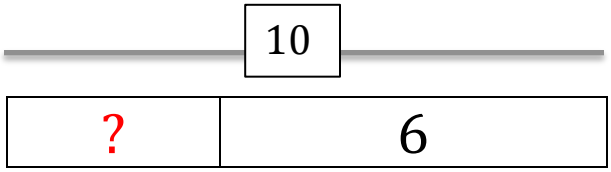
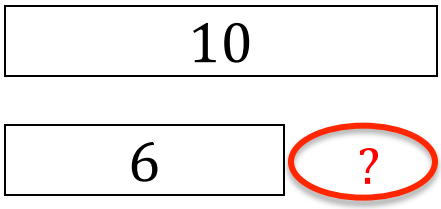
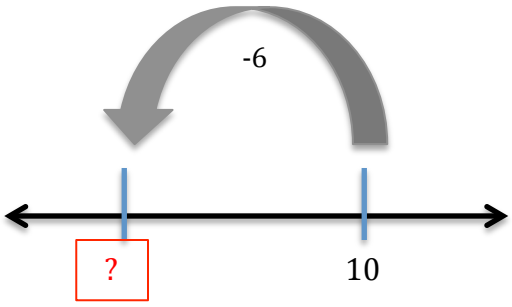
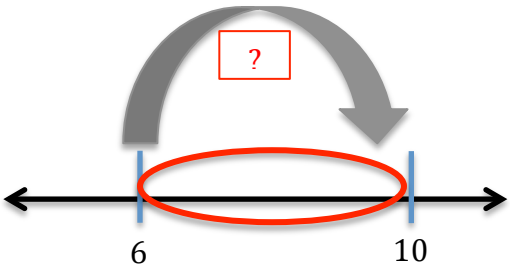
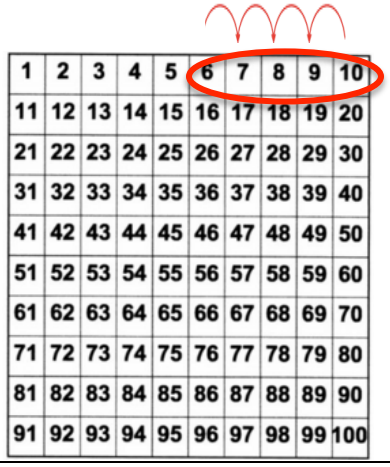
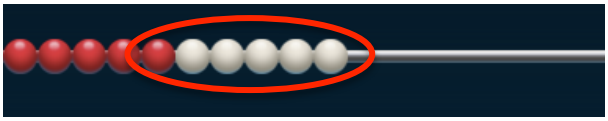
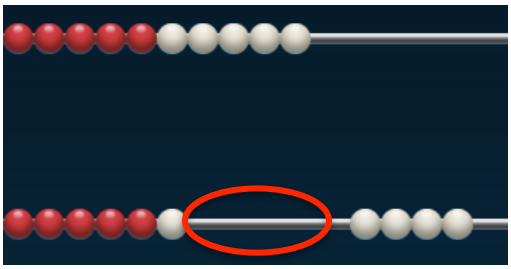
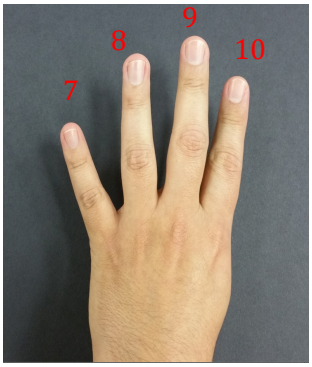
Tulare County Office of Education
Jim Vidak, County Superintendent of Schools

Tools for Modeling Subtraction Situations

	Take From	**Compare**
Strategy	Remove/Count Back	Count up the difference/Distance
Context	One quantity is decreasing.	Two different quantities- comparing the differences.
	"There are 10 frogs on the log. 6 frogs jump in the water. How many frogs are still on the log?"	"There are 10 green frogs and 6 brown toads. How many more frogs are there than toads?"
Tool: Ten Frames		
Tool: Tape Diagram		
Tool: Open Number Line		

Tool: Hundreds Chart		
Tool: Rekenrek		
Fingers		

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

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

Table K-3. Types of Addition and Subtraction Problems (Kindergarten)

Type of Problem	Result Unknown	Change Unknown	Start Unknown
Add to	Two bunnies sat on the grass. Three more bunnies hopped there. How many bunnies are on the grass now? 2 + 3 = ☐	Two bunnies were sitting on the grass. Some more bunnies hopped there. Then there were 5 bunnies. How many bunnies hopped over to the first two? 2 + ☐ = 5	Some bunnies were sitting on the grass. Three more bunnies hopped there. Then there were 5 bunnies. How many bunnies were on the grass before? ☐ + 3 = 5
Take from	Five apples were on the table. I ate 2 apples. How many apples are on the table now? 5 – 2 = ☐	Five apples were on the table. I ate some apples. Then there were 3 apples. How many apples did I eat? 5 – ☐ = 3	Some apples were on the table. I ate 2 apples. Then there were 3 apples. How many apples were on the table before? ☐ – 2 = 3

	Total Unknown	Addend Unknown	Both Addends Unknown
Put together/ Take apart	Three red apples and 2 green apples are on the table. How many apples are on the table? 3 + 2 = ☐	Five apples are on the table. Three are red, and the rest are green. How many apples are green? 3 + ☐ = 5, 5 – 3 = ☐	Grandma has 5 flowers. How many can she put in her red vase and how many in her blue vase? 5 = 0 + 5, 5 = 5 + 0 5 = 1 + 4, 5 = 4 + 1 5 = 2 + 3, 5 = 3 + 2

	Difference Unknown	Bigger Unknown	Smaller Unknown
Compare	("How many more?" version): Lucy has 2 apples. Julie has 5 apples. How many more apples does Julie have than Lucy?	(Version with *more*): Julie has 3 more apples than Lucy. Lucy has 2 apples. How many apples does Julie have?	(Version with *more*): Julie has 3 more apples than Lucy. Julie has 5 apples. How many apples does Lucy have?
	("How many fewer?" version): Lucy has 2 apples. Julie has 5 apples. How many fewer apples does Lucy have than Julie? 2 + ☐ = 5, 5 – 2 = ☐	(Version with *fewer*): Lucy has 3 fewer apples than Julie. Lucy has 2 apples. How many apples does Julie have? 2 + 3 = ☐, 3 + 2 = ☐	(Version with *fewer*): Lucy has 3 fewer apples than Julie. Julie has five apples. How many apples does Lucy have? 5 – 3 = ☐, ☐ + 3 = 5

Note: Kindergarten students solve problem types with the darkest shading; students in grades one and two solve problems of all subtypes. Unshaded problems are the most difficult; first-grade students work with these problems but do not master them until grade two (adapted from NGA/CCSSO 2010d and UA Progressions Documents 2011a).

California Math Framework
http://www.cde.ca.gov/ci/ma/cf/draft2mathfwchapters.asp

Resources and Acknowledgements

It Makes Sense! Using the Hundreds Chart to Build Number Sense, Grades K-2

http://www.amazon.com/Makes-Sense-Hundreds-Number-Grades/dp/193509937X

It Makes Sense!: Using Ten-frames to Build Number Sense, Grades K-2

http://www.amazon.com/It-Makes-Sense-Ten-frames-Number/dp/1935099108

Digital Rekenrek

http://www.mathlearningcenter.org/web-apps/number-rack/

Math learning Center Rekenrek Resource

http://bridges1.mathlearningcenter.org/media/Rekenrek_0308.pdf

California Math Framework

http://www.cde.ca.gov/ci/ma/cf/draft2mathfwchapters.asp

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