

Math Strategies & Tools

E. Skiba

(Simple to Complex)

Fingers

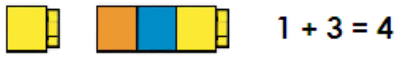


$2 + 3 = 5$
 $5 + 1 = 6$

Simple- Counting with the first finger (ex. 1, 2, 3, 4, 5)

Complex- I know that I have five fingers, so one more makes six.

Counters



$1 + 3 = 4$

Simple- Using cubes or actual items to represent or act out problem.

$10 + 1 = 11$



Complex- Creating "sticks of ten" or organizing counters to help solve the problem

Pictures

$4 + 5 = 9$



Simple- Drawing of the actual item



Complex- Using dot patterns with organizations of ten

Tally Marks

$5 + 4 = 9$ $10 + 9 = 19$



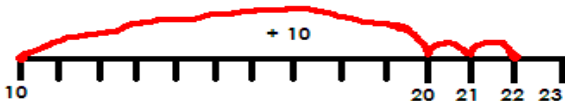
Simple- Adding two numbers that are represented by tally marks.

Complex- Building from the greater number

Number Line



Simple- Adding by ones



Complex- Adding ten and then adding by ones

100 Chart

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

Simple

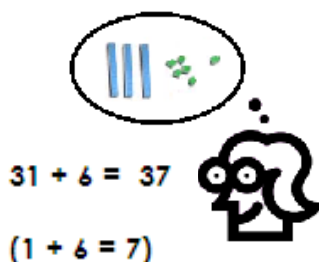
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Complex

Simple- Adding by ones

Complex- Adding ten and then adding by ones

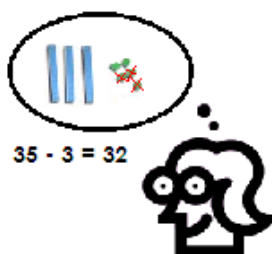
Counting Forward



Simple- Adding by ones

Complex- Adding tens and then adding by ones

Counting Backwards



Simple- Subtracting the ones

Complex- Subtracting the ones and then the tens

Doubles

$$4 + 4 = 8$$

$$20 + 20 = 40$$

Simple- Adding single digit doubles

Complex- Adding double digit doubles

Near Doubles (Doubles plus one or plus two)

$$7 + 8 = 15$$

(I know that 7 doubled is 14 so one more totals 15)

$$20 + 22 = 42$$

Simple- Double one digit numbers plus one or two

Complex- Double a two digit number plus one or two

Number Strings

$$7 + 3 + 7 = 17$$

$$14 + 3$$

Simple- Adding known pairs or doubles and then adding additional numbers

Complex- Creating number strings near ten and combining values

Make Ten

$$7 + 3 + 7 = 17$$

$$10$$

Simple- Find combinations of ten and add digits

Complex- Find more than one combination of ten and add digits.

Decompose Numbers

$$7 + 5 = 12$$

$$2 + 5 + 5 = 10$$

$$10 + 2 = 12$$

Simple- decomposes single digit numbers

Complex- Decomposes double digit numbers and forms combinations of ten

Compensation

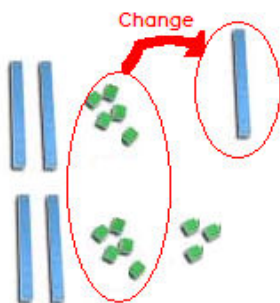
$$\begin{array}{r} 45 + 5 \quad 50 \\ + 36 - 5 \quad + 31 \\ \hline 81 \end{array}$$

Simple- Using single digit numbers

Complex- Using two digit numbers to get to nearest ten

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Regrouping



Simple- Changing ones to a stick of ten

Complex- Regrouping with high knowledge of base ten system and place value.

$$\begin{array}{r} 25 \\ + 28 \\ \hline 53 \end{array}$$

Change 10 ones

Calculators



Simple- Use appropriate grade level one step functions

Complex- Complete multiple step problems