

Math Strategies We Use in 1st Grade



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This booklet will show you some of the strategies I have learned to be more successful at solving problems. As I become a stronger mathematician, I learn how and why problems can be solved in different ways. The more I learn and use these different strategies, the more efficient and accurate I will become.

Counting

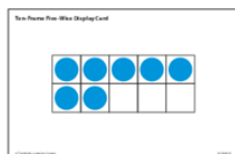
I see 10 ones as one "ten" and can count by groups of tens.

Unifix Cubes

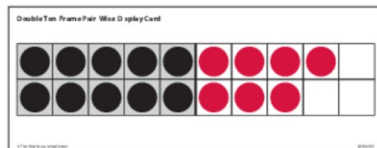


I see 1 group of ten and 3 more.

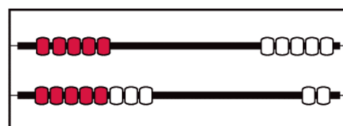
Ten Frame



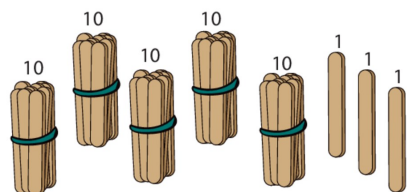
Double Ten Frame



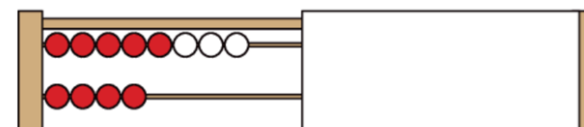
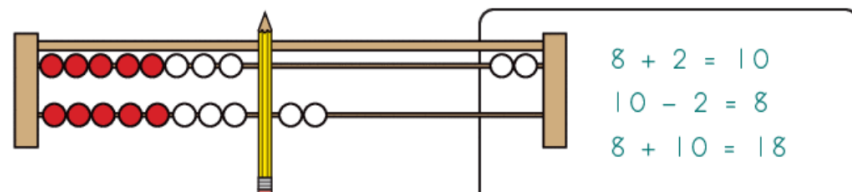
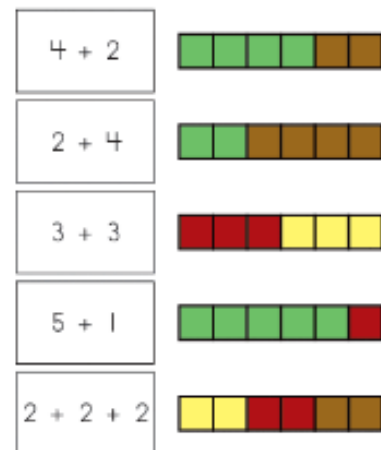
Number Rack



Bundles



53 as 5 bundles of 10 and 3 singles



Students determine that there are 8 beads hidden, because they see 12 beads, and $12 + 8 = 20$.
The problem can be expressed as an equation with a missing addend: $12 + \underline{\quad} = 20$.

Solving $62 + 10$:

Counting On

$$62 + 10 = 72$$

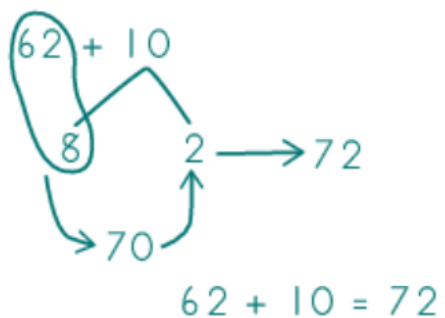


Counting by Tens

62, 72

$$62 + 10 = 72$$

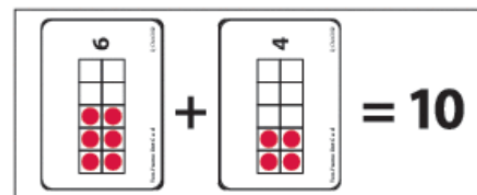
Place Value Splitting



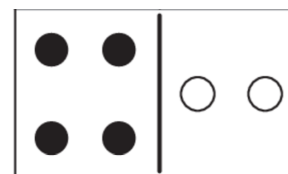
Addition

I can fluently add within 10.

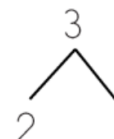
Ten Frames



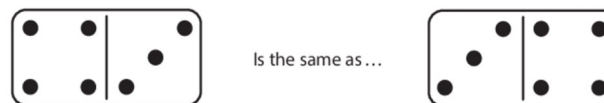
Dominoes



Number Bonds



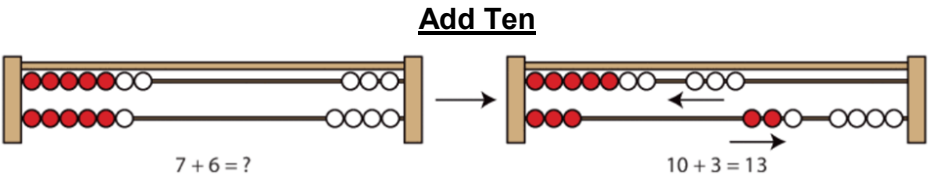
Fact Families



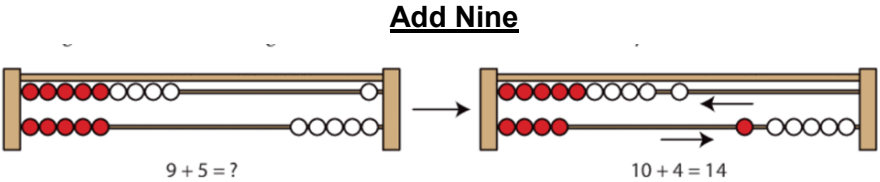
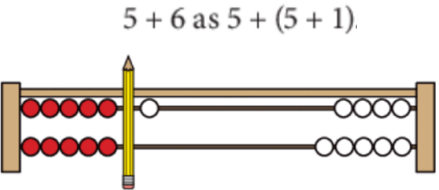
$$\begin{aligned} 4 + 2 &= 6 \\ 2 + 4 &= 6 \\ 6 - 4 &= 2 \\ 6 - 2 &= 4 \end{aligned}$$

I can add within 20 using strategies and within 100 using models and place value.

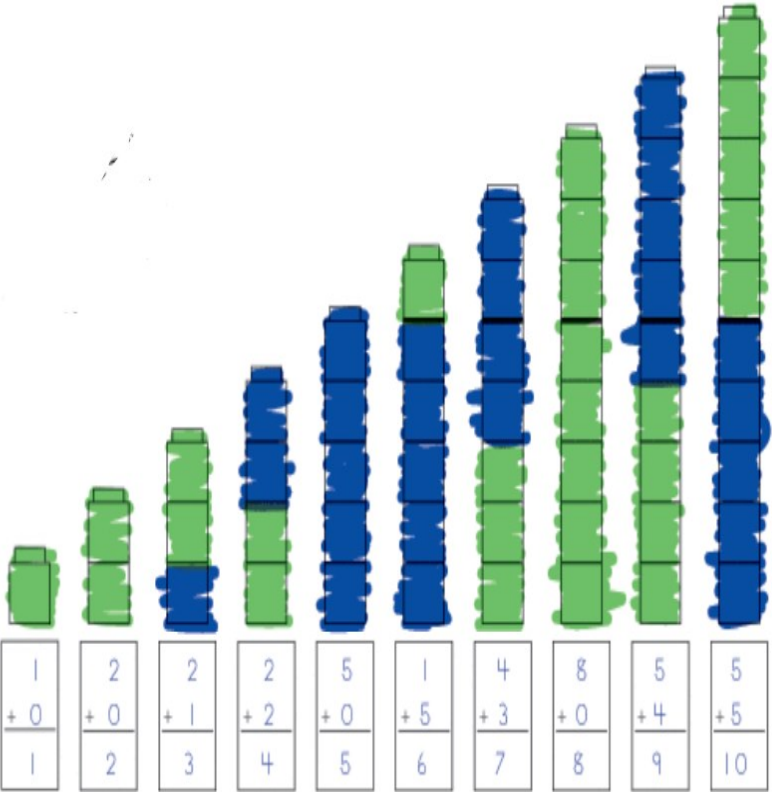
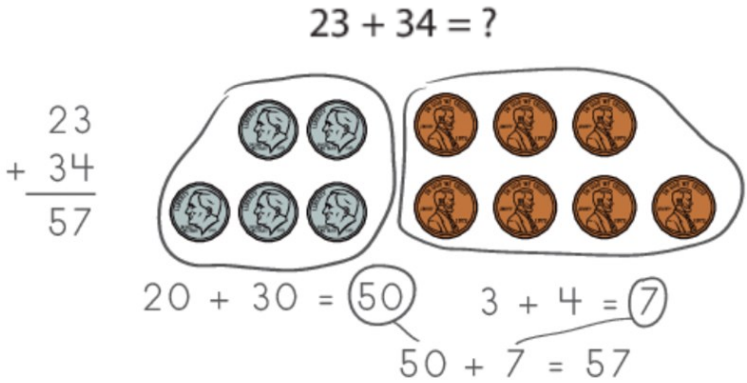
Here are some examples of students using different strategies:



Doubles, Doubles Plus or Minus One



Place Value Splitting

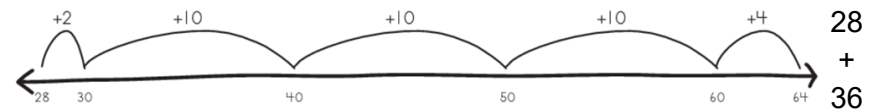
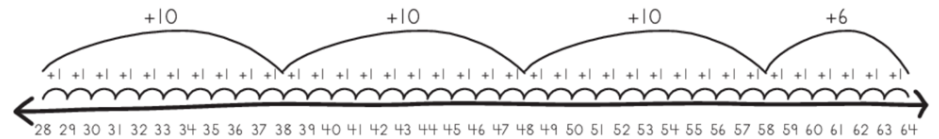


End of the Year Expectations

- Count to 120 starting at any number
- Count on from a given number
- Write numbers 0-120
- Fluently add and subtract within 10
- Add and subtract within 20 using strategies such as decomposing and composing tens and ones.
- Add and subtract within 100 using concrete models, place value, and other strategies

Number Lines

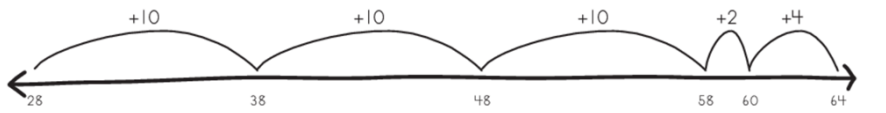
I can add numbers by using different strategies on a number line.



$$\begin{array}{r} 28 \\ + 36 \\ \hline \end{array}$$

$$2 + (10 + 10 + 10) + 4$$

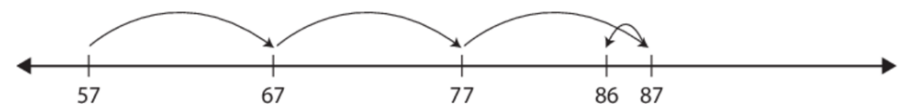
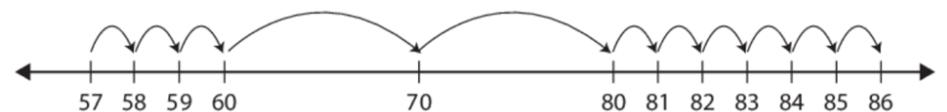
$$30 + 2 + 4 = 36$$



$$(10 + 10 + 10) + 2 + 4$$

$$30 + 2 + 4 = 36$$

$$57 + 29$$

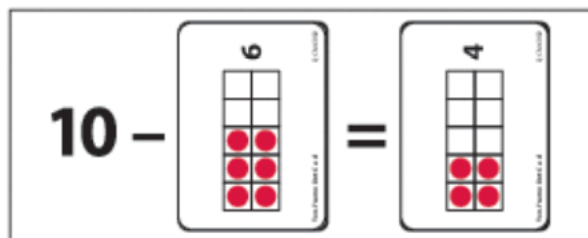


Subtraction

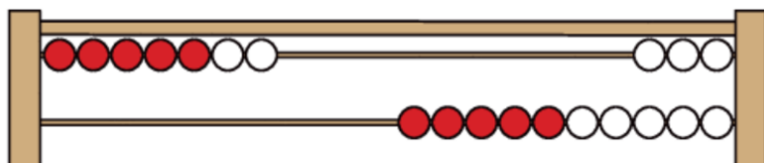
I can fluently subtract within 10. Using the same strategies I use when adding, I can subtract within 20.

I can subtract multiples of 10 (10-90) within 100 using models and place value.

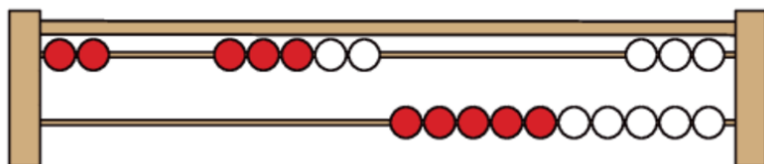
Ten Frames



Number Rack



7 beads. Now ... slide 5 to the right.

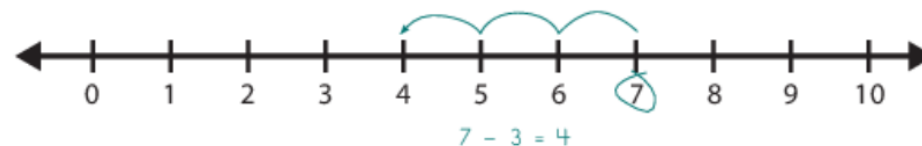


Two beads are left.

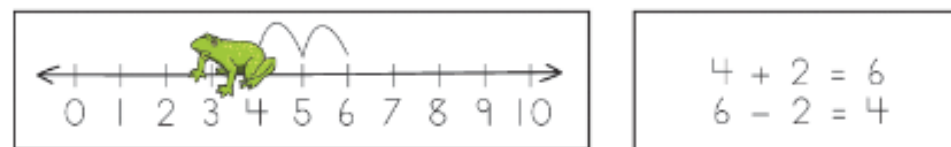
Number Bonds



Number Line



Fact Families



$$9 + 3 = 12$$

$$3 + 9 = 12$$

$$12 - 9 = 3$$

$$12 - 3 = 9$$