## Mental Math Strategies

**Making Tens:** Create combinations of 10 to simplify the addition.

$$4 + 9 + 6 =$$
$$(4 + 6) + 9$$
$$10 + 9 = 19$$

**4 + 9 + 6 = 19**

**Making Friendly or Landmark Numbers (5s, 10s, and monetary values):** Make a friendly number by taking from one addend and giving the same amount to the other addend.

$$18 + 23$$
$$+2 \quad -2$$
$$20 + 21 = 41$$

**18 + 23 = 41**

**Making Doubles:** Add or subtract from either or both addends to create doubles.

$$8 + 9$$
$$+1$$
$$9 + 9 = 18$$
$$-1$$
$$17$$

**8 + 9 = 17**

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## Grade 2 Mathematics

### What's In?

- Building conceptual understanding with manipulatives

- Explaining why the answer is correct and how they arrived at the answer

- Understanding there are multiple strategies to arrive at a solution and attempting to solve a problem in more than one way

- Applying mathematical understandings to new situations in order to solve a problem

### What's Out?

- Learning the steps, algorithm, without conceptual understanding

- Giving the "number" as the correct answer and moving on without explanations

- Thinking there is only one method to finding a solution to a problem

- Applying their understanding of mathematical concepts to only similar problems to find a solution

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# Math Tools and Strategies Your Child Will Use in Grade 2



Math teaching & learning is... M³ Meaningful, Measurable & Motivating!
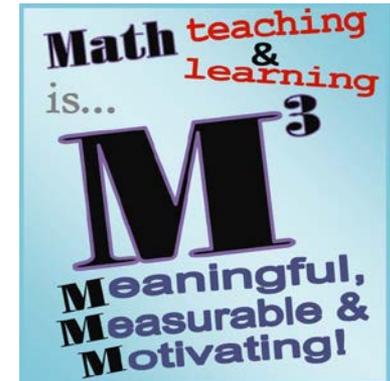
*This brochure illustrates mathematical strategies students will be learning throughout the school year.*
*Additional Parent Resources can be found at www.lbschools.net under Mathematics and Family Resources.*

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# Addition Strategies

**Base Ten Blocks:** Base Ten Blocks are used when students are learning to add.

$$132 + 23$$

*Concrete:* using manipulatives

132 →

+ 23 →
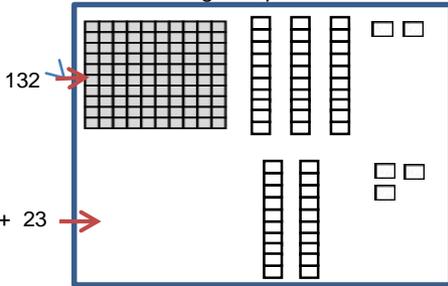
*Representational:* Drawing pictures

132 →

+ 23 →
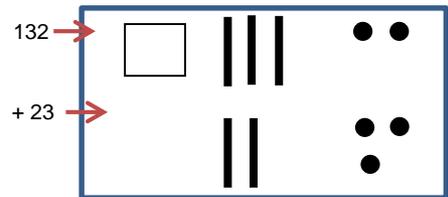
*Abstract:* number sentence

$$132 + 23 = 155$$

**Partial Sums:** Break apart addends by place value and then add the parts.

```
132  =  100 + 30 +  2
+23  =         20 +  3
        100 + 50 +  5
        100 + 55
                155
```

# Number Lines

You can use an open number line that does not have individual tick marks when adding and subtracting.

**Counting On:** Numbers can be broken apart and added in many ways. This is one example**.**

**57 + 41= 98**

+10   +10   +10   +10   +1

57   67   77   87   97   98
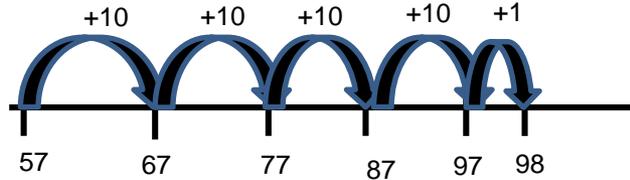
**Counting Up:** A strategy to find the difference by "counting up". Start with 27 and count up to 63.

**63 – 27 = 36**

+20      +10    +3   +3

27      47      57   60   63
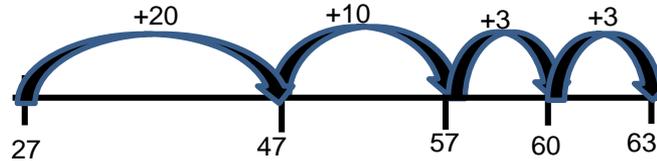
**Counting Back:** A strategy to find the difference by "counting back". Start with 86 and count back 38 using friendly numbers.

**86 – 38 = 48**

– 2   – 6    – 10      – 10      – 10

48  50   56      66      76      86
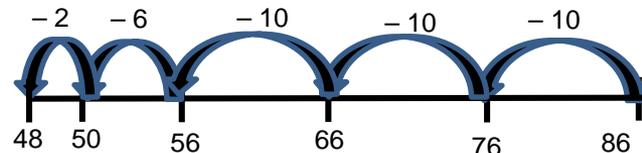
# Subtraction Strategies

**Base Ten Blocks:** When we subtract using base ten blocks, we begin with the total .

$$146 – 112$$

Start with 146 →

Take away 112 →

34 are left
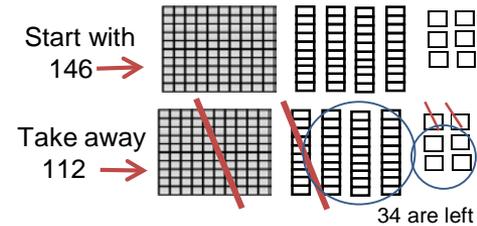
**Base Ten Blocks:** Subtraction with regrouping.

$$51 – 29$$

Here is "51".

There aren't enough ones to take away 9 ones.

This is 51 after regrouping 1 ten to make 4 tens and 11 ones.

Now we can take away 9 ones from 11 ones. Then take away 2 tens from the 4 tens.

$$51 – 29 = 22$$

**Partial Difference:** Break apart a number and subtract parts.

345 – 132
We break apart 132 into 100 + 30 + 2

345 – **100** = 245
245 – **30** = 215
215 – **2** = 213

So,  345 – 132 = 213