Addition Strategies

2nd Grade

This unit will share addition strategies that can be used to teach the process of addition, instead of the algorithm.

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Common Core State Standards

Use place value understanding and properties of operations to add and subtract.

2.NBT.B.5 Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction.

2.NBT.B.6 Add up to four two-digit numbers using strategies based on place value and properties of operations.

2.NBT.B.7 Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.

2.NBT.B.8 Mentally add 10 or 100 to a given number 100-900, and mentally subtract 10 or 100 from a given number 100-900.

2.NBT.B.9 Explain why addition and subtraction strategies work, using place value and the properties of operations.

Strategy # 1

Decomposing Numbers

Decomposing Numbers

45 + 37 = ☐

40 + 30 = 70

5 + 7 = 12

70 + 12 = 82

so...

45 + 37 = 82

Steps:

1. Break apart your tens and ones.
2. Add tens together.
3. Add ones together.
4. Add the two numbers together to get your final sum.

Let's Try a Couple Problems...

$$28 + 53 = \square$$

Tens _____ + _____ = _____

Ones _____ + _____ = _____

_____ + _____ = _____

35 + 29 = ☐

Tens _____ + _____ = _____

Ones _____ + _____ = _____

_____ + _____ = _____

The **<u>Decomposing Numbers Strategy</u>** also works for 3-digit and 4-digit numbers.

436 + 241 = ☐

400 + 200 = 600

30 + 40 = 70

6 + 1 = 7

600 + 70 + 7 = 676

so.... 436 + 241 = 676

<u>Steps:</u>

1. Break apart your hundreds, tens, and ones.
2. Add hundreds together.
3. Add your tens together.
4. Add ones together.
5. Add the three numbers together to get your final sum.

Strategy # 2

Open Number Line

Open Number Line

53 + 45 = ☐

40+5

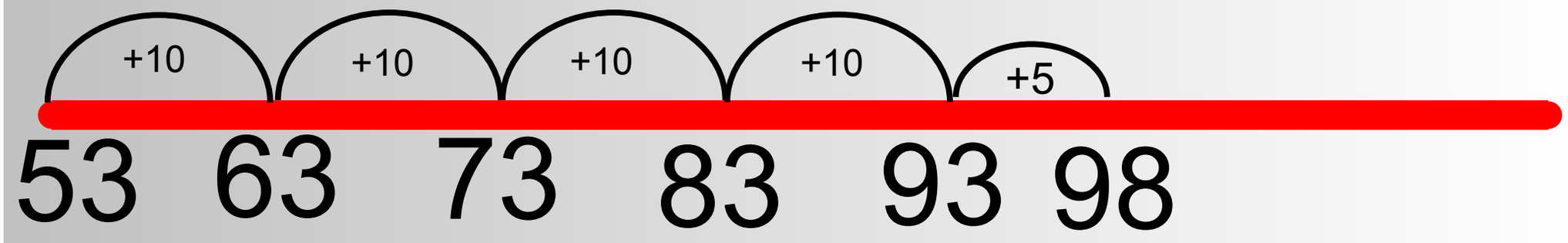
Steps

1. Draw your number line. Place the larger number at the beginning of the number line.

2. Decompose the second number.

3. Add the tens.

4. Add the ones.



Open Number Line

237 + 56 = ☐

50 + 6

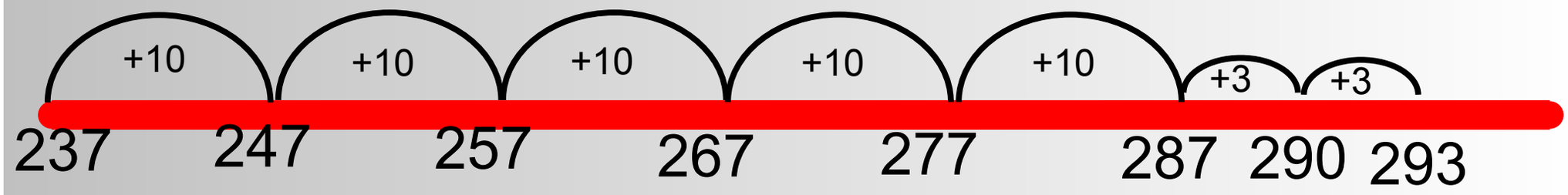
Steps

1. Draw your number line. Place the larger number at the beginning of the number line.

2. Decompose the second number.

3. Add the tens.

4. Add the ones.



Let's Try a Couple Problems...

$$82 + 36 = \square$$

$$57 + 49 = \square$$

$$29 + 89 = \square$$

Strategy # 3

Friendly Numbers

Friendly Numbers

*When using the Friendly Numbers strategies, you will adjust one or both of the numbers by adding/subtracting to make the addends easier to add.

48 + 24 = ☐

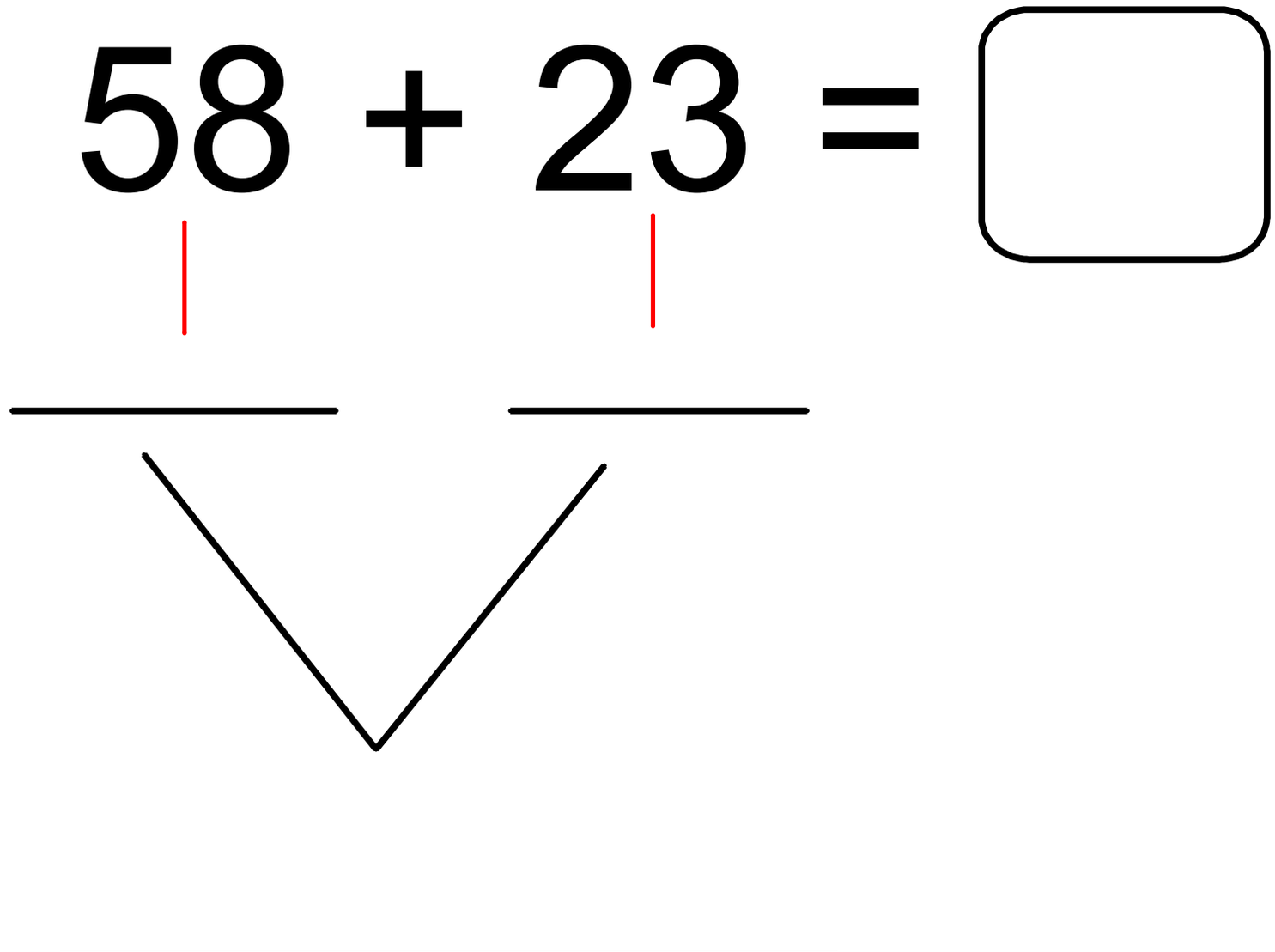
48 + 2 = 50

24 - 2 = 22

50 + 22 = 72

Let's Try a Couple Problems...

$$72 + 34 = \square$$


58 + 23 =

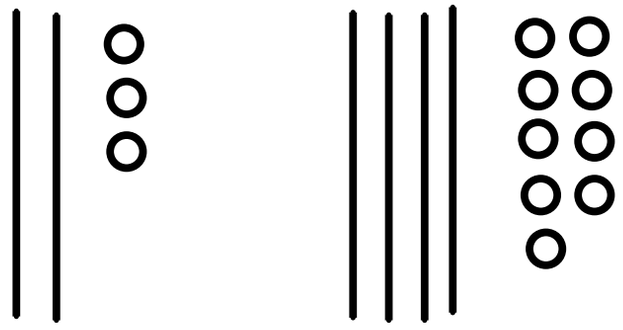
Strategy # 4

Base-10 Blocks

Base-10 Strategy

*To use the Base-10 Strategy, students will draw a picture to solve.

23 + 49 = 72



***Remember when you have 10 or more ones, you must regroup to the ten's place.**

Let's Try a Couple Problems...

$$22 + 73 = \square$$

$$45 + 26 = \square$$

$$172 + 334 = \square$$