North Penn School District

Elementary Math Parent Letter

Grade 2

Unit 2 – Chapter 4: 2-Digit Addition

Examples for each lesson

Lesson 4.1

Break Apart Ones to Add

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

Sometimes when you are adding, you can break apart ones to make a ten.

$37 + 8 = \underline{?}$

Look at the two-digit addend, 37. What digit is in the ones place? $\underline{7}$

Decide how many you need to add to the ones digit to make 10.

$7 + \underline{3} = 10$, and $37 + \underline{3} = 40$

Break apart that number from the one-digit addend, 8.

$8 - 3 = 5$

Finally, write the new number sentence. $40 + 5 = \underline{45}$

Lesson 4.2

Use Compensation

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

This is a way to add 2-digit numbers.
Take ones from one addend to make the other addend a tens number.

$27 + 38 = \underline{?}$

First, find the addend with the greater ones digit. $\underline{38}$
How many ones would you need to add to make it a tens number?

$38 + \underline{} = 40$ Add $\underline{2}$ to make $\underline{40}$.

Next, take that many ones away from the other addend.
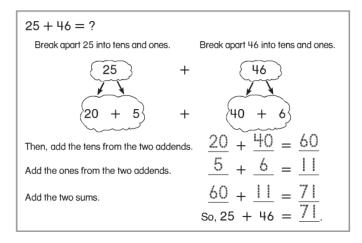
$27 - 2 = 25$ The two new addends are $\underline{25}$ and $\underline{40}$.

Write the new addition sentence to find the sum.

$\underline{25} + \underline{40} = \underline{65}$

Lesson 4.3

Break Apart Addends as Tens and Ones

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

$25 + 46 = ?$

Break apart 25 into tens and ones.   Break apart 46 into tens and ones.

$$25 \quad + \quad 46$$

$$(20 + 5) \quad + \quad (40 + 6)$$

Then, add the tens from the two addends. $\underline{20} + \underline{40} = \underline{60}$

Add the ones from the two addends. $\underline{5} + \underline{6} = \underline{11}$

Add the two sums. $\underline{60} + \underline{11} = \underline{71}$

So, $25 + 46 = \underline{71}$.

More information on this strategy is available on Animated Math Model #24.

Lesson 4.4

Model Regrouping for Addition

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

Add 18 and 25.
Show 18 and 25 with ▭▭▭▭□.
Count the ones.
How many ones are there in all? 13 ones
Can you make a ten? yes

Tens	Ones

Trade 10 ones
for 1 ten.
This is called
regrouping.

Tens	Ones

Count the tens. How many
tens are there in all? 4 tens

Count the ones. How many
ones are there in all? 3 ones

Tens	Ones

$\underline{4}$ tens $\underline{3}$ ones is the same as $\underline{43}$.

More information on this strategy is available on Animated Math Model #25.

Lesson 4.5

Model and Record
2-Digit Addition

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

Model 33 + 19.

How many ones are there in all? __12__ ones

Can you make a ten? __yes__

	Tens	Ones
	☐	
	3	3
+	1	9

Regroup 10 ones as 1 ten. Write a 1 in the tens column to show the regrouped ten.

How many ones are left after regrouping? __2__ ones

Write that number in the ones place.

	Tens	Ones
	1	
	3	3
+	1	9
		2

How many tens are there in all? __5__ tens

Write that number in the tens place.

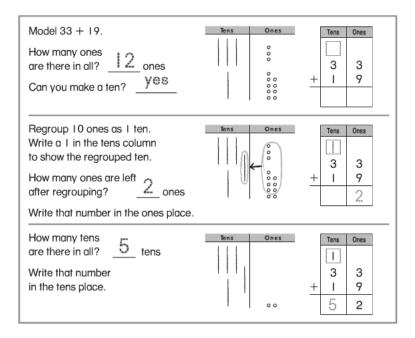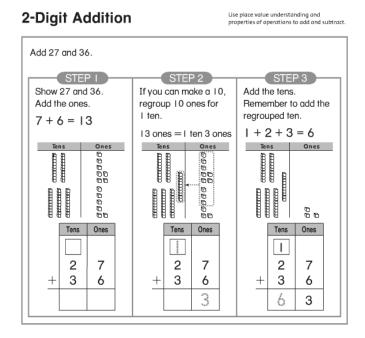|	Tens	Ones
	1	
	3	3
+	1	9
	5	2

More information on this strategy is available on Animated Math Model #26.

Lesson 4.6

2-Digit Addition

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

Add 27 and 36.

STEP 1
Show 27 and 36. Add the ones.

$7 + 6 = 13$

	Tens	Ones
	☐	
	2	7
+	3	6

STEP 2
If you can make a 10, regroup 10 ones for 1 ten.

13 ones = 1 ten 3 ones

	Tens	Ones
	1	
	2	7
+	3	6
		3

STEP 3
Add the tens. Remember to add the regrouped ten.

$1 + 2 + 3 = 6$

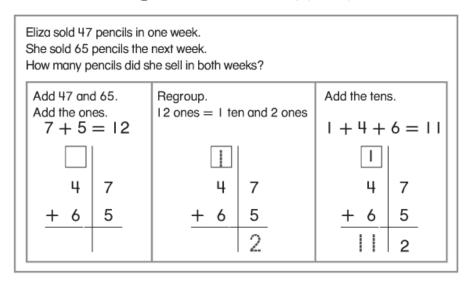|	Tens	Ones
	1	
	2	7
+	3	6
	6	3

More information on this strategy is available on Animated Math Model #27.

Lesson 4.7

Practice 2-Digit Addition

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

Eliza sold 47 pencils in one week.
She sold 65 pencils the next week.
How many pencils did she sell in both weeks?

Add 47 and 65. Add the ones. $7 + 5 = 12$	Regroup. 12 ones = 1 ten and 2 ones	Add the tens. $1 + 4 + 6 = 11$

☐
  4 | 7
+ 6 | 5
	┆
	  4 | 7
	+ 6 | 5
	   | 2
		1
		  4 | 7
		+ 6 | 5
		┆┆ | 2

More information on this strategy is available on Animated Math Model #27.

Lesson 4.8

Rewrite 2-Digit Addition

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

Add. $43 + 19 = ?$

STEP 1	STEP 2	STEP 3
What is the tens digit in 43? 4 Write 4 in the tens column. Write the ones digit, 3, in the ones column.	What is the tens digit in 19? 1 Write 1 in the tens column. Write the ones digit, 9, in the ones column.	Add the ones. Regroup if you need to. Add the tens.

Tens	Ones
☐ 4	3
+	

Tens	Ones
☐ 4	3
+ 1	9

Tens	Ones
1 4	3
+ 1	9
6	2

More information on this strategy is available on Animated Math Model #28.

Lesson 4.9

Problem Solving • Addition

Represent and solve problems involving addition and subtraction.

Hannah has 14 pencils. Juan has 13 pencils.
How many pencils do they have in all?

Unlock the Problem

What do I need to find?	What information do I need to use?
how many pencils	Hannah has __14__ pencils.
they have in all	Juan has __13__ pencils.

Show how to solve the problem.

Hannah's 14 pencils	Juan's 13 pencils

__?__ pencils in all

14 + 13 = ■   __27__ pencils

Lesson 4.10

Algebra • Write Equations to Represent Addition

Represent and solve problems involving addition and subtraction.

Sara took 16 pictures.
Then she took 17 more pictures.
How many pictures did Sara take in all?

Use a bar model to show the problem.

16 pictures	17 pictures

__?__ pictures in all

Write a number sentence. Solve.

16 + 17 = ■   __33__ pictures

Lesson 4.11

Algebra • Find Sums for 3 Addends

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

You can add three numbers in different ways.
Start by adding the ones first.

```
  14          Look at the
  22          column of ones
+ 36          digits. Choose
─────         two of the digits
  72          to add first.
              Then add the
              other digit.
```

$$4 + 6 = 10$$
$$10 + 2 = 12$$

Then add the tens.

$$1 + 1 + 2 + 3 = 7$$

```
  14          Start at the top
  22          of the ones
+ 36          column. Add the
─────         first two digits,
  72          and then add the
              third digit.
```

$$4 + 2 = 6$$
$$6 + 6 = 12$$

Then add the tens.

$$1 + 1 + 2 + 3 = 7$$

Lesson 4.12

Algebra • Find Sums for 4 Addends

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

You can add 4 numbers in different ways.
One way is to add pairs of digits in the ones column.

```
    2
   13        Add a pair
   25        of digits.       Then add
   38        3 + 5 = 8        these two
 + 16                         sums.
 ────        Add the          8 + 14 = 22
   92        other pair.
             8 + 6 = 14
```

Then add the digits in the tens column.

Vocabulary

Regroup – an action that involves changing a number from one form to an equivalent form