

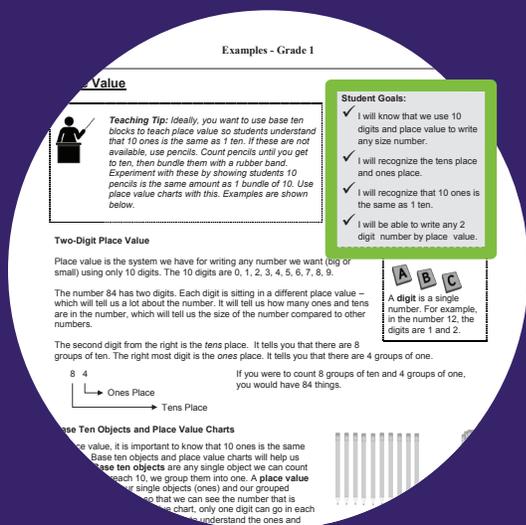


# 1<sup>st</sup> Grade Math

## Curriculum Sample

A Grade Ahead's rigorous, year-round enrichment program will challenge your child to a higher academic standard. Our math material consists of two components: **numerical drills** and **curriculum**. Numerical drills are quick exercises that will improve your child's speed and accuracy in computational skills while our monthly curriculum includes mathematical topics that your child will see in school. Both numerical drills and curriculum work together to ensure a complete understanding and mastery of each topic.

The numerical drills and curriculum will each have an in-depth lesson (which we call Examples), as well as homework, and answers. In these next pages, we offer a closer look at what our examples, homework, and answers offer as well as a specific sample of both numerical drills and curriculum.



## Student Goals

Student goals are listed at the top right of the Examples each week. These are topics that your child should understand by the end of the week.



Lesson pages are titled "Examples - Grade 1," answer pages are titled "Answers - Grade 1," and homework pages are simply titled "Grade - 1."

Examples - Grade 1

**Place Value**

**Teaching Tip:** Ideally, you want to use base ten blocks to teach place value so students understand that 10 ones is the same as 1 ten. If these are not available, use pencils. Count pencils until you get to ten, then bundle them with a rubber band. Experiment with these by showing students 10 pencils is the same amount as 1 bundle of 10. Use place value charts with this. Examples are shown below.

**Student Goals:**

- ✓ I will know that we use 10 digits and place value to write any size number.
- ✓ I will recognize the tens place and ones place.
- ✓ I will recognize that 10 ones is the same as 1 ten.
- ✓ I will be able to write any 2 digit number by place value.

**Two-Digit Place Value**

Place value is the system we have for writing any number we want (big or small) using only 10 digits. The 10 digits are 0, 1, 2, 3, 4, 5, 6, 7, 8, 9.

The number 84 has two digits. Each digit is sitting in a different place value – which will tell us a lot about the number. It will tell us how many ones and tens are in the number, which will tell us the size of the number compared to other numbers.

The second digit from the right is the **tens place**. It tells you that there are 8 groups of ten. The right most digit is the **ones place**. It tells you that there are 4 groups of one.

8 4  
 ↳ Ones Place      ↳ Tens Place

If you were to count 8 groups of ten and 4 groups of one, you would have 84 things.

**Base Ten Objects and Place Value Charts**

Place value, it is important to know that 10 ones is the same as 1 ten. Base ten objects and place value charts will help us understand this. Base ten objects are any single object we can count. For example, if we have 10 base ten objects, we can count them one by one. If we reach 10, we group them into one. A **place value chart** is a chart that we can use to see the number that is being written. In a place value chart, only one digit can go in each place. This helps us understand the ones and tens.

**A digit is a single number.** For example, in the number 12, the digits are 1 and 2.

## Teaching Tip

Teaching tips are suggestions to help you or your teacher present the topic to your child. These could include topics to review first or even an activity to do with your child.

Examples - Grade 1

**Place Value**

**Teaching Tip:** Ideally, you want to use base ten blocks to teach place value so students understand that 10 ones is the same as 1 ten. If these are not available, use pencils. Count pencils until you get to ten, then bundle them with a rubber band. Experiment with these by showing students 10 pencils is the same amount as 1 bundle of 10. Use place value charts with this. Examples are shown below.

**Student Goals:**

- ✓ I will know that we use 10 digits and place value to write any size number.
- ✓ I will recognize the tens place and ones place.
- ✓ I will recognize that 10 ones is the same as 1 ten.
- ✓ I will be able to write any 2 digit number by place value.

**Two-Digit Place Value**

Place value is the system we have for writing any number we want (big or small) using only 10 digits. The 10 digits are 0, 1, 2, 3, 4, 5, 6, 7, 8, 9.

The number 84 has two digits. Each digit is sitting in a different place value – which will tell us a lot about the number. It will tell us how many ones and tens are in the number, which will tell us the size of the number compared to other numbers.

The second digit from the right is the **tens place**. It tells you that there are 8 groups of ten. The right most digit is the **ones place**. It tells you that there are 4 groups of one.

8 4  
 ↳ Ones Place      ↳ Tens Place

If you were to count 8 groups of ten and 4 groups of one, you would have 84 things.

**Base Ten Objects and Place Value Charts**

Place value, it is important to know that 10 ones is the same as 1 ten. Base ten objects and place value charts will help us understand this. Base ten objects are any single object we can count. For example, if we have 10 base ten objects, we can count them one by one. If we reach 10, we group them into one. A **place value chart** is a chart that we can use to see the number that is being written. In a place value chart, only one digit can go in each place. This helps us understand the ones and tens.

**A digit is a single number.** For example, in the number 12, the digits are 1 and 2.

## ABC Word Boxes

These word boxes define terms used within the lesson that your child may not know.



Each day's homework usually takes about 30 minutes to complete.

...system we have for writing any number we want (big or only 10 digits. The 10 digits are 0, 1, 2, 3, 4, 5, 6, 7, 8, 9.

...number 84 has two digits. Each digit is sitting in a different place value — it will tell us a lot about the number. It will tell us how many ones and tens are in the number, which will tell us the size of the number compared to other numbers.

The second digit from the right is the **tens** place. It tells you that there are 8 groups of ten. The right most digit is the **ones** place. It tells you that there are 4 groups of one.

8 4  
 ↳ Ones Place      ↳ Tens Place

**Base Ten Objects and Place Value Charts**

In place value, it is important to know that 10 ones is the same as 1 ten. Base ten objects and place value charts will help us with that. **Base ten objects** are any single object we can count and when we reach 10, we group them into one. A **place value chart** organizes our single objects (ones) and our grouped objects (10) in a chart so that we can see the number that is represented. In a place value chart, only one digit can go in each column. See the examples below to understand the ones and tens place.

10 ones = 1 tens

**Example:** Use a place value chart to write each number.

	Tens	Ones	Number
a) 2 tens 5 ones	2	5	25
b) 3 tens 9 ones	3	9	39
c) 8 tens 2 ones	8	2	82
d) 4 tens	4	0	40

## Examples

To illustrate the topic, examples are provided to you and your child. These examples help demonstrate how to solve the problem or figure out the answer.

Grade - 1

Start time: \_\_\_\_\_ End time: \_\_\_\_\_ Score: \_\_\_\_\_

Use the groups of ten and groups of one objects to answer these questions. Fill in the place value chart and write the number.

(1-2) 

Tens	Ones

 Number: \_\_\_\_\_

(3-4) 

Tens	Ones

 Number: \_\_\_\_\_

Tens	Ones

 Number: \_\_\_\_\_

Tens	Ones

 Number: \_\_\_\_\_

## Homework

Each week, four days of homework are given to apply concepts from that week's lesson and reinforce the topic.

### Answers - Grade 1

#### Week: 5 - Day 1

1-2)	2 tens, 3 ones; 23	3-4)	5 tens, 1 one; 51
5-6)	6 tens, 8 ones; 68	7)	0
8)	T	9)	0
10)	O	11)	1
12)	7	13)	16 green beads [ $10+10=16$ ]
14)	11 red beads [ $16-5=11$ ]	15)	8 blue beads [ $11-3=8$ ]
16)	18 orange beads [ $10+8=18$ ]	17)	4 yellow beads [16 green; 20 total; $20-16=4$ ]

# Answers

Answers are provided to check your child's homework. Enter the scores into the Parent Portal to track progress and note which areas may need more work.

Add and subtract these numbers.

$$\begin{array}{r} 1. \quad 20 \\ + \quad 7 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 2. \quad 11 \\ + \quad 3 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 3. \quad 24 \\ + \quad 3 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 4. \quad 13 \\ + \quad 5 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 5. \quad 14 \\ + \quad 3 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 6. \quad 23 \\ + \quad 4 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 7. \quad 11 \\ + \quad 2 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 8. \quad 24 \\ + \quad 5 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 9. \quad 13 \\ + \quad 3 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 10. \quad 22 \\ + \quad 3 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 11. \quad 22 \\ + \quad 5 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 12. \quad 20 \\ + \quad 6 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 13. \quad 21 \\ + \quad 4 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 14. \quad 12 \\ + \quad 4 \\ \hline \\ \hline \end{array}$$

$$\begin{array}{r} 15. \quad 25 \\ + \quad 4 \\ \hline \\ \hline \end{array}$$

## Answers - Addition / Subtraction 1

---

### Day: 1

1) 27  
4) 18  
7) 13  
10) 25  
13) 25

2) 14  
5) 17  
8) 29  
11) 27  
14) 16

3) 27  
6) 27  
9) 16  
12) 26  
15) 29



**Word Problems**



**Teaching Tip:** Word problems are a large part of the math curriculum. When teaching how to approach and solve them to students at a younger age, be sure to make the problems relatable. Point out the addition and subtraction keywords in all questions. Be sure to teach using the C.U.B.E method.

**Student Goals:**

- ✓ I will be able to read a word problem and know what information to use to solve it.
- ✓ I will learn the keywords that will help me know when to add or subtract in word problems.
- ✓ I will use the C.U.B.E. method to solve word problems.

Word problems connect what you are learning about (addition and subtraction) to ‘real life.’ In doing this, you must be able to understand the story, pick out important information, and translate English terms to math terms.

When you begin a word problem, you should do the following:

- (1) Read through it carefully one to two times.
- (2) Picture the story from the word problem in your head. Act it out with classmates or family members if needed.
- (3) Follow the C.U.B.E. method.

The C.U.B.E. Method

**C**ircle the numbers: *These are the numbers you will be adding or subtracting.*

**U**nderline the question: *This word or phrase will tell you to add or subtract the numbers you circled.*

**B**ox the keyword or key phrase: *This will remind you what is being asked and to include the item you are counting with your number answer.*

**E**nd with a picture: *Use the steps above to help you solve the problem.*



**Add** means to join or group together.

**Subtract** means to remove or take away.

Below is a list of keywords and key phrases that tell you whether to add or subtract in a word problem. Memorize them and their meanings to help you solve word problems.

Add +	Subtract -
Altogether	Difference
Both	Fewer
Total	How many more
Sum	Left
Combine	Remains



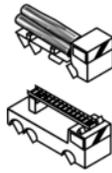
**Example:** Ted had 2 toy trucks to play with. His friend Eddie had 3 toy trucks to play with. How many toy trucks did they have altogether?

First, read the problem a few times. Make sure you can picture the story in your head. Next, use the C.U.B.E. method to help you find the answer.

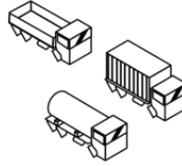
**C**ircle the numbers, **U**nderline the question, **B**ox the keyword, **E**nd with a picture.

Ted had 2 toy trucks to play with. His friend Eddie had 3 toy trucks to play with. How many toy trucks did they have **altogether**?

Ted:



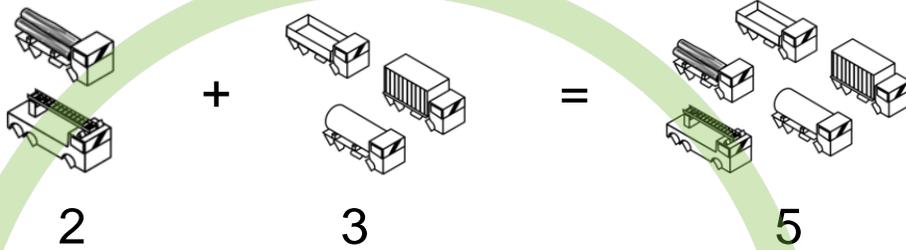
Eddie:



How many toy trucks did they have altogether?

If you look back at the question that you underlined, you will see that the keyword “altogether” is used, and “altogether” tells you to add Ted’s and Eddie’s toy trucks.

Altogether:



$2 + 3 = 5$  toy trucks

 *Note: Be sure to write the name of the item you are counting in your answer.*



**Example:** Jake has 16 stamps. Donald has 8 fewer stamps. How many stamps does Donald have?

The numbers are circled, the question is underlined, and the keyword is boxed. The keyword tells you to subtract to find the answer. Use this information to draw a picture to help you solve.



$16 - 8 = 8$  stamps

 *Note: When drawing pictures, students do not have to draw the specific item mentioned in the word problems; they may use circle, dots, lines, etc. to represent them.*

Date: \_\_\_\_\_

Start time: \_\_\_\_\_ End time: \_\_\_\_\_

Score: \_\_\_\_/16

**Label the following keywords or key phrases as addition (+) or subtraction (-).**

- (1) **Altogether** \_\_\_\_\_
- (2) **Difference** \_\_\_\_\_
- (3) **Fewer** \_\_\_\_\_
- (4) **How many more** \_\_\_\_\_
- (5) **Both** \_\_\_\_\_
- (6) **Sum** \_\_\_\_\_
- (7) **Left** \_\_\_\_\_
- (8) **Total** \_\_\_\_\_

**Word Problems: Use the C.U.B.E. method in each question.**

**Dana picked up 8 rocks. Her friend, Katie, picked up 13 rocks. How many more rocks did Katie pick up?**

- (9) **Circle the numbers.**  
**Underline the question.**  
**Box the keyword or key phrase.**
- (10) **Which keyword or key phrase is in this word problem?**  
\_\_\_\_\_
- (11) **Does it tell you to add or to subtract?**  
(a) add                      (b) subtract

**Nicole has 4 fewer dogs than cats. She has 6 cats.  
How many dogs does she have?**

- (12) **Circle the numbers.**  
**Underline the question.**  
**Box the key word or key phrase.**



- (13) **Which keyword or key phrase is in this word problem?  
Write it in the blank below.**



- (14) **Does it tell you to add or subtract?**

(a) add                      (b) subtract

- (15) **End with a picture. Draw a picture to help you answer  
the question. Be sure to include what you are counting in  
your answer.**

**CHALLENGE!!! Use the C.U.B.E. method.**

- (16) **Amy bought 16 pieces of gum. She gave her sister 5.  
How many pieces of gum does she have left?**



Week: 1 – Day 1

- |      |      |
|------|------|
| 1) + | 2) - |
| 3) - | 4) - |
| 5) + | 6) + |
| 7) - | 8) + |
- 9) Dana picked up 8 rocks. Her best friend, Katie picked up 13 rocks. How many more rocks did Katie pick up?
- 10) "How many more"
- 11) b
- 12) Nicole has 4 fewer dogs than cats. She has 6 cats. How many dogs does she have?
- 13) "Fewer"
- 14) b
- 15) Make sure students draw a picture of 6 cats and cross out 4; 2 dogs [6-4=2]
- 16) 11 pieces of gum [Students should do all the steps of the C.U.B.E. method; 16-5=11]

