2nd Grade Math Parent Letter 4th Nine Weeks

In an effort to keep parents and guardians informed of the expectations and content being covered in math class this year, this informational handout will be provided for each nine weeks. Its intent is to assist in guiding you in ways to support your child in deepening their mathematical understanding.

Each nine weeks we will spend time reviewing material taught in prior grades as it relates to the standards being taught in second grade. Our goal is to keep a balance of skill-based learning along with enhancing our student's ability to problem solve and think conceptually.

| **Review Material from Prior Grades** |
|---|
| 1) Use addition and subtraction within 20 to solve word problems with unknowns in all positions. (1.OA.1) |
| 2) Solve word problems with addition of three whole numbers. (1.OA.2) |
| 3) Apply the properties of operations as strategies to add and subtract. (1.OA.3) |
| 4) Understand subtractions as an unknown-addend problem. (1.OA.4) |
| 5) Relate counting to addition and subtraction. (1.OA.5) |
| 6) Add and subtract within 20, demonstrating fluency for addition and subtraction within 10. (1.OA.6) |
| 7) Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10. (1.NBT.4) |
| 8) Measure the length of objects using nonstandard units. (1.MD.2) |
| 9) Collect, organize, analyze, and interpret data into different representations with up to three categories. (1.MD.4) |
| 10) Identify the values of all U.S. coins and know their comparative values. Use appropriate notation. Find equivalent values of all U.S. coins. (1.MD.5) |
| 11) Distinguish between defining and non-defining attributes. (1.G.1) |
| 12) Compose two- and three- dimensional shapes to make composite shapes. (1.G.2) |
| 13) Partition circles and rectangles into equal shares. (1.G.3) |
| **New Material for 2nd Grade** |
| 1) I can use addition and subtraction to solve one- and two-step word problems with unknowns in all positions. (2.OA.1) |
| 2) I can fluently add and subtract within 20 using mental strategies. (2.OA.2) |
| 3) I can model equal groups with rectangular arrays, write an equation for a given array, and determine total number of objects in an array. (2.OA.4) |
| 4) I can fluently add and subtract using strategies based on place value, the properties of operations, and the relationship between addition and subtraction within 100. (2.NBT.5) |

*Please note the list above highlights the main skills to be assessed. Teachers may include additional content to meet the needs of their students.

| New Material for 2nd Grade, Continued |
|---|
| 5) I can add and subtract within 1,000 using concrete models, drawings, and various strategies. (2.NBT.7) |
| 6) Explain why addition and subtraction strategies work. (2.NBT.9) |
| 7) I can solve one- and two-step word problems involving the same units of length, use drawings to solve addition and subtraction problems within 100 involving the same units, and solve equations with a symbol to represent the unknown in all positions. (2.MD.5) |
| 8) I can represent whole numbers as lengths and represent whole-number sums and differences within 100 on a number line. (2.MD.6) |
| 9) I can use a calendar to answer simple real world problems such as "How many weeks are in a year?" or "James gets a $5 allowance every 2 months, how much money will he have at the end of each year?" (2.MD.8b) |
| 10) I can generate measurement data by measuring lengths of objects to the nearest whole unit and construct a line plot using the generated data. (2.MD.9) |
| 11) I can partition a rectangle into rows and columns of same-sized squares and count to find the total number. (2.G.2) |
| 12) I can describe the whole as two halves, three thirds, and four fourths. Partition identical wholes in multiple ways (circle and rectangles). (2.G.3) |
| **End of Nine Weeks Expectations** |
| 1) Students will be assessed using various formative assessments, including, but not limited to: observations, checklists, interviews, journals, independent practice, and exit tickets. |

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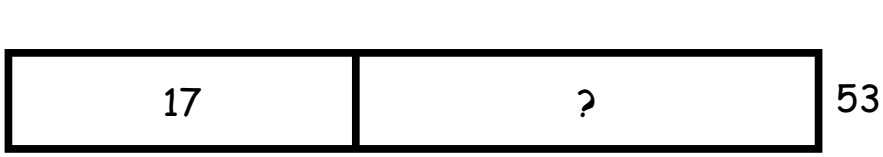
## Examples of Math Standards

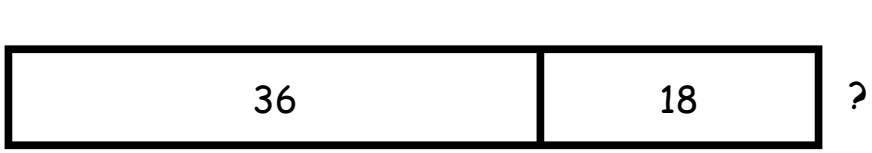
**2.OA.1**

Mindy is carrying 53 glass vases. She trips and breaks 17 of them. The store manager gives her 18 more vases. How many vases does Mindy have now?

A)




B)




Mindy has 54 vases now.

Steps for Model Drawing:

| Picture Reminder | Task |
|---|---|
|  | **Read** the entire problem. |
|  | **Rewrite** the question in sentence form, leaving a space for the answer. |
|  | **Determine *"who"*** and the "***what***" is involved in the problem. |
|  | **Draw** the unit bar(s) to model each variable. |
|  | **Chunk** the problem and **adjust** the unit bars to match the information. **Fill in** the question mark. |
|  | Correctly **compute** and **solve** the problem. |
|  | **Write** the answer in the sentence. Make sure the answer **makes sense.** |

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## Examples of Math Standards

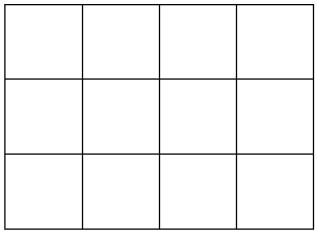
### 2.OA.2

Students can add and subtract within 20 and demonstrate fluency for addition and subtraction within 20 using mental strategies such as: counting on; making a ten; decomposing a number leading to a ten; using the relationship between addition and subtraction; and creating equivalent but easier or known sums.

| **Making a ten** | **Decomposing a number leading to a ten** |
|---|---|
| 8 + 6 =<br>8 + 2 + 4 =<br>10 + 4 = 14 | 13 – 4 =<br>13 – 3 – 1=<br>10 – 1 = 9 |
| **Relationship between addition and subtraction** | **Creating equivalent but easier or known sums** |
| 8 + 4 = 12<br>12 – 8 = 4 | 6 + 6 + 1 =<br>12 + 1 = 13 |

### 2.OA.4

Students can model equal groups with rectangular arrays, write an equation for a given array, and determine total number of objects in an array.



3 rows of 4
4 + 4 + 4 = 12

2 rows of 4
4 + 4 = 8

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## Examples of Math Standards

### 2.NBT.5

Students can use various strategies for adding and subtracting within 100. Some of the addition strategies we are learning are shown in the table.

**48 + 23**

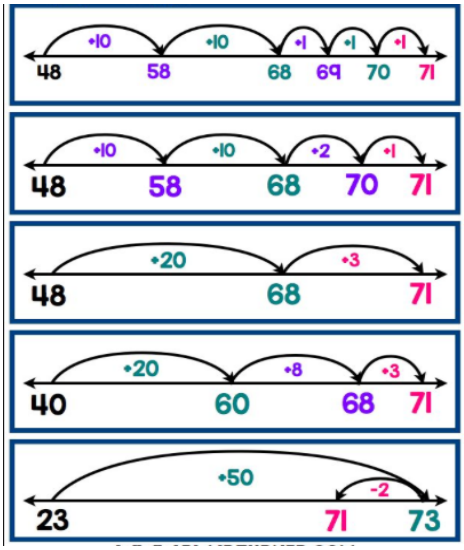
**Place Value**
(with/without base ten blocks)

48 + 23 =
40 + 20 and 8 + 3
60 + 11 = 71

**Compensation**
48 + 23

48 + 2 = 50
23 – 2 = 21
50 + 21 = 71

**Open Number Line**
There are several ways to use the number line.

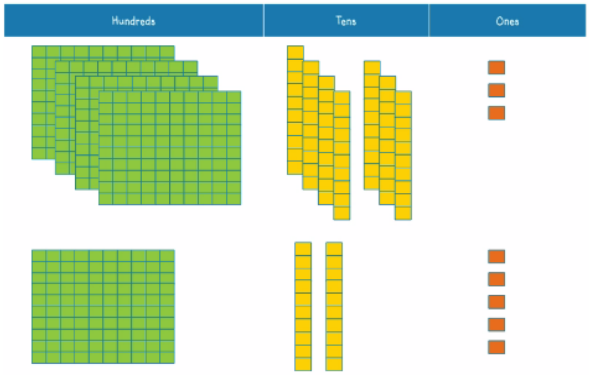



### 2.NBT.7

Students can add and subtract within 1,000 using concrete models or drawings to show how to add within 1,000 using a strategy based on place value (collecting the hundreds, tens, and ones, and when necessary, composing ten ones to make a ten or composing ten tens to make a hundred). *Strategies are based on place value and include using base ten blocks (flats, rods, and units) and drawings.*

473 + 125 =
400 + 100 = 500
70 + 20 = 90
3 + 5 = 8

500 + 90 + 8 = 598




5 hundreds + 9 tens + 8 ones

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## Examples of Math Standards

**2.MD.5**

Students can solve one- and two-step word problems involving the same units of length, use drawings to solve addition and subtraction problems within 100 involving the same units, and solve equations with a symbol to represent the unknown in all positions.

Rose's hair is 22 inches long. Lilly's hair is 3 inches shorter than Rose's. Amy's hair is 2 inches longer than Rose's hair. Who has the longest hair?

Rose- 22 inches
Lilly- 22 inches – 3 inches = 19 inches
Amy- 22 inches + 2 inches = 24 inches

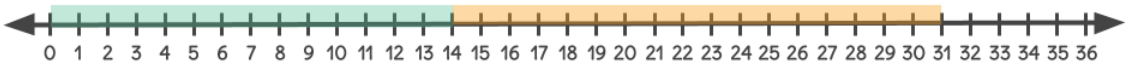
Amy has the longest hair.

**2.MD.6**

Students can use a number line to add and subtract lengths within 100.

The hermit crab crawled 14 cm on Monday. It crawled another 17 cm on Tuesday. How many centimeters did the hermit crab crawl altogether?

14 cm + 17 cm = 31 cm




The hermit crab crawled 31 cm altogether.

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## Examples of Math Standards

### 2.MD.8b

Students can use a calendar to answer simple real world problems.

1. There are 30 days in April.
2. April 21st falls on a Tuesday.
3. April is the fourth month of the year.
4. The last day of April is on a Thursday.
5. Monday is the day before Tuesday.
6. Thursday is the day after Wednesday.
7. James gets a $5 allowance every week. How much money will he have after 4 weeks? $20

**April 2020**

| S | M | T | W | T | F | S |
|---|---|---|---|---|---|---|
| | | | 1 | 2 | 3 | 4 |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | 29 | 30 | | |

### 2.MD.9

Students can measure and record the lengths of several objects to the nearest whole-number. Students can create a line plot with a horizontal scale marked off in whole-number units. Students can record length measurements on a line plot.

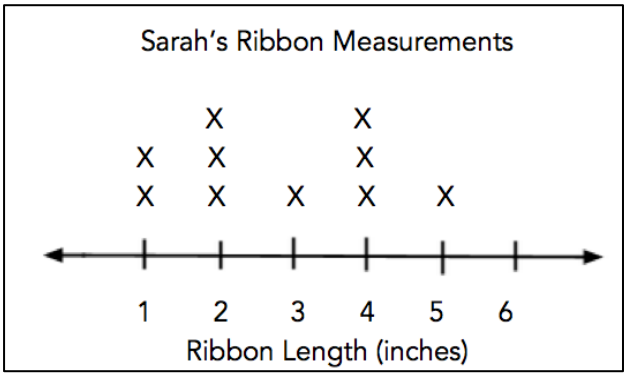
Sarah measured a handful of ribbons to the nearest inch. She wrote down each ribbon's measurement shown in the table.

Sarah's Ribbon Measurements

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 4 | 4 | 2 | 2 | 2 | 3 | 1 | 4 | 1 | 5 |

1. How many pieces of ribbon did Sarah measure? 10 pieces

2. How much longer is the longest piece of ribbon compared to the shortest piece of ribbon? 4 inches

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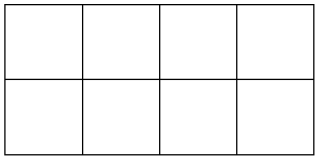
## Examples of Math Standards

**2.G.2**

Students can partition a rectangle into rows and columns of same-sized squares. *This standard connects to 2.OA.4, where students are arranging objects in an array of rows and column.*

Partition the rectangle into 2 rows and 4 columns. How many small squares did you make? Students should notice there are 8 equal squares in this rectangle. When the paper is folded, students should recognize they are the same size.

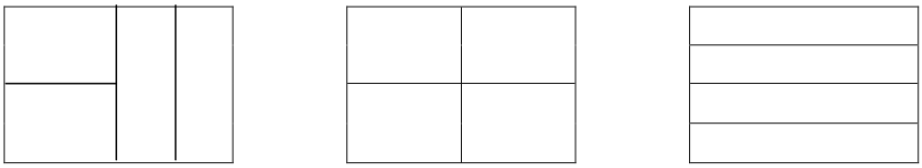


4 + 4 = 8

**2.G.3**

Students can partition circles and rectangles into two halves, three thirds, and four fourths. Students can partition circles and rectangles in multiple ways.

These rectangles are partitioned in three different ways.



There are four equal parts in each rectangle. Therefore, each part is one-fourth of the whole rectangle.

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