

Grade 1 Essential Understandings

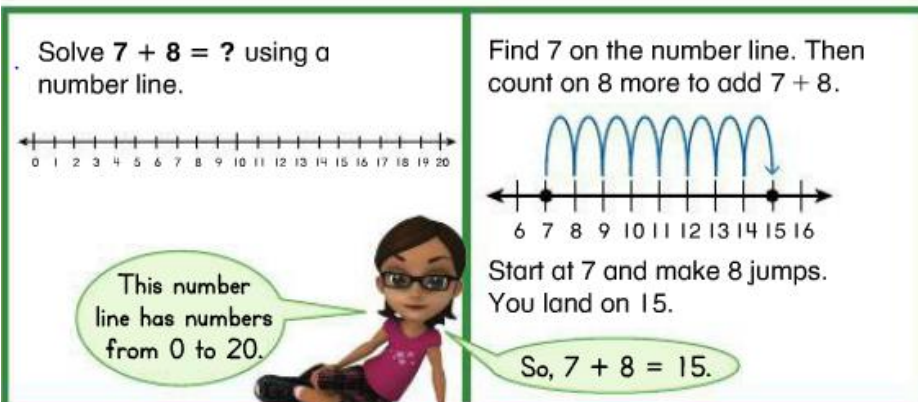
Standards of Mathematical Practice emphasized through the year in grades K-5:

- Make sense of problems and persevere in solving them
- Reason abstractly and quantitatively
- Construct viable arguments and critique the reasoning of others
- Model with mathematics
- Use appropriate tools strategically
- Attend to precision
- Look for and make use of structure
- Look for and express regularity in repeated reasoning

Grade 1 – Marking Period 1

Throughout the first marking periods students will build upon what students learned in kindergarten about addition and subtraction problems to 10. Students will develop a deep understanding of addition and subtraction by working on putting together, take from, take apart and compare problems. Students will use concrete representations such as counters or unifix cubes or blocks and an addition equation to find the results. Students will also use representational tools such as number lines to learn to count on to add within 10.

Examples include:



Solve $7 + 8 = ?$ using a number line.

Find 7 on the number line. Then count on 8 more to add $7 + 8$.

This number line has numbers from 0 to 20.

Start at 7 and make 8 jumps. You land on 15.

So, $7 + 8 = 15$.

Mathematical Focus	Topic Goals
Number Concepts	Relate counting to addition and subtraction (by counting on 2 to add 2)
Numbers and Operations	<p>Use addition and subtraction within 20 to solve word problems.</p> <p>Understand that a subtraction equation can also be solved as unknown addend equation.</p> <p>Add and subtract within 20 demonstrating fluency within 10.</p> <p>Understand that numbers can be added in any order and still have the same sum (Commutative Property).</p> <p>Understand that when adding 3 or more numbers, 2 numbers can be added together to make the equation easier to add. (Example: To add $2 + 6 + 4$, the second two numbers can be added to make a ten, so $2 + 6 + 4 = 2 + 10 = 12$.) (Associative Property)</p>



Grade 1 – Marking Period 2

During the second marking period students are introduced to different strategies for solving subtraction facts to 20. These strategies include, counting to subtract, making 10 to subtract, and using addition to subtract. Students will also focus on the understanding that the equal sign indicates that both sides on an equation have the same value. The Associative property is also introduced as a way to group numbers flexibly when adding more than two numbers. Finally, during marking period 2, students will focus on counting to 120 by tens and ones, reading and writing numbers to 120, and representing a number of objects with a written numeral for quantities to 120.

Examples include:

This equation is true. Both sides equal 9.

$$3 + 6 = 4 + 5$$

$$9 = 9$$

You can also count on to subtract $11 - 5$ on a number line.

I start at 5 and count on 6 to get to 11.
 $5 + 6 = 11$,
 so $11 - 5 = 6$.

This block shows 100. You say one hundred for this number.

100

The next number you say is one hundred one because you have 1 hundred and 1 one.

101

When you count forward, you keep counting by 1s.

101, 102, 103, 104, 105

105 means 1 hundred and 5 ones. You say one hundred five.

When you count higher, you start with the words one hundred.

116, 117, 118, 119, 120

116 is one hundred sixteen.

Mathematical Focus	Topic Goals
Number Concepts	Relate counting to addition and subtraction (by counting on 2 to add 2) Count to 120 starting at any number and be able to read and write numbers.
Numbers and Operations	Add and subtract within 20 demonstrating fluency within 10. Understand that a subtraction equation can also be solved as unknown addend equation. Use addition and subtraction within 20 to solve word problems. Determine the unknown whole number in an addition or subtraction equation relating to three whole numbers. Understand the meaning of the equal sign. Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20. Commutative and Associative Property. Understand that the two digits of a two-digit number represent amounts of tens and ones.
Measurement and Data	Organize, represent, and interpret data with up to three categories.

Grade 1 – Marking Period 3

The next few topics strengthen students understanding of place value to prepare them for two-digit addition and subtraction. Later in the marking period students are introduced to adding a 2-digit number to a 1-digit number with a sum less than 100. Lastly, students begin to dive into measuring where they will focus on just one measurable attribute of an object.

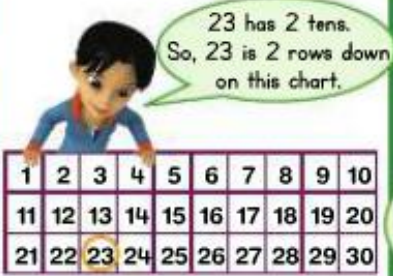
Examples include:

You can use a hundred chart to add tens and ones.

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

$4 + 23 = ?$

Start on the larger number, 23.




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

Add the ones. For every one you add, move right 1 column.

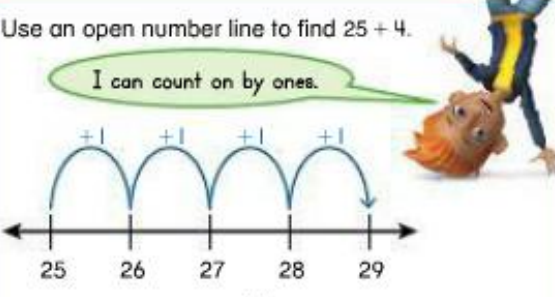
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30

4 is 4 ones.
Move right 4 columns.
 $23 + 4 = 27$, so
 $4 + 23 = 27$.



Use an open number line to find $25 + 4$.

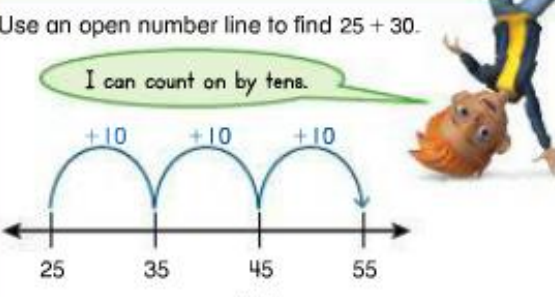
I can count on by ones.



$25 + 4 = 29$


Use an open number line to find $25 + 30$.

I can count on by tens.



$25 + 30 = 55$


Find $21 + 7$.
First use blocks.



$21 + 7 = 28$

Then, draw what you did to solve.

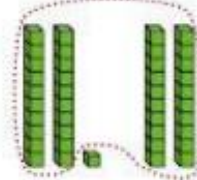
I added the ones first.




$21 + 7 = 28$

Find $21 + 20$.

I added the tens and then the one.



$21 + 20 = 41$



$21 + 20 = 41$

Mathematical Focus	Topic Goals
Number Concepts	Understand that the two digits of a two-digit number represent amounts of tens and ones. Given a two-digit number, mentally find 10 more or 10 less than the number, without having to count; explain the reasoning used. Add within 100 using concrete models or drawings and strategies based on place value, properties of operations and/or the relationship between +/-.
Numbers and Operations	Subtract multiples of 10 (Example: 10, 20, 30, etc.) from multiples of 10.
Measurement and Data	Order three objects by length and compare the lengths of two objects indirectly by using a third object. Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end and understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps.

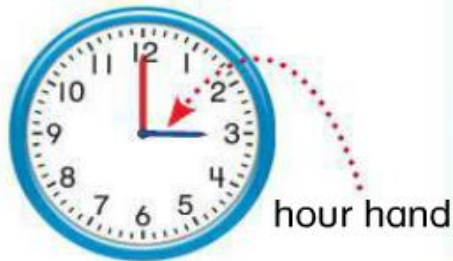


Grade 1 – Marking Period 4

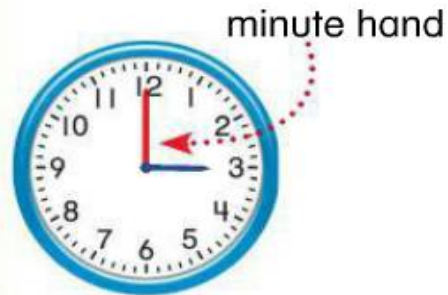
In the last marking period, students will be introduced to telling and writing time to the hour and half hour using both analog and digital clocks. During the last half of the marking period students will deepen their understanding of defining and non-defining attributes of two-dimensional and three dimensional shapes.

Examples include:

The short hand is the **hour hand**.
The hour hand tells us what **hour** it is.



The long hand is the **minute hand**.
The minute hand points to the **minute**.



Circle the words that are true for the shape.

1.



All triangles:

are yellow.

have 3 straight sides.

are short.

have 3 vertices.

All triangles must have 3 straight sides and 3 vertices. Not all triangles must be yellow or short.

Mathematical Focus	Topic Goals
Numbers and Operations	Add and subtract within 20 demonstrating fluency within 10.
Geometry	Distinguish between defining attributes versus non-defining attributes; build and draw shapes to possess defining attributes. Compose two-dimensional shapes and three-dimensional shapes to create a composite shape. Partition circles and rectangles into 2 or 4 equal shares and describe the shares as halves or fourths/quarters, understanding that creating more shares makes smaller shares.
Measurement and Data	Tell and write time to the hours and the half-hour using analog and digital clocks.