1st Grade Unit 7 Mathematics

Dear Parents,

The Mathematics Georgia Standards of Excellence (MGSE), present a balanced approach to mathematics that stresses understanding, fluency, and real world application equally. Know that your child is not learning math the way many of us did in school, so hopefully being more informed about this curriculum will assist you when you help your child at home.

Below you will find the standards from Unit Seven in bold print and underlined. Following each standard is an explanation with student examples. Please contact your child's teacher if you have any questions.

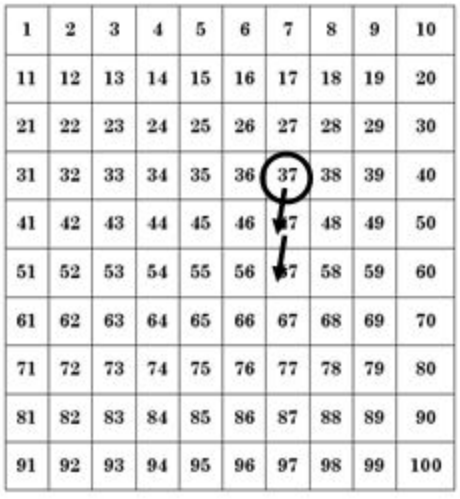
NBT.4 Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.

This standard calls for students to use concrete models, drawings and place value strategies to add a two-digit number and a one-digit number within 100. Students will also add a two-digit number with a multiple of 10 within 100. Students will not be exposed to the standard algorithm of carrying or borrowing in first grade.

Example:
There are 37 children on the playground. When a class of 20 more students come to the playground, how many students were on the playground altogether?

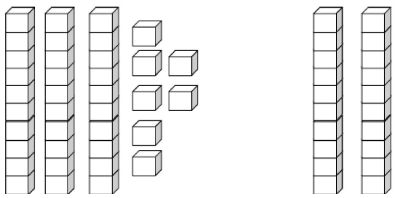
Student 1

I used a hundreds chart. I started at 37 and moved down two rows to add 20 more. I landed on 57, so there are 57 students on the playground.



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
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Student 2
I used place value blocks and made a pile of 37 and a pile of 20. I joined the tens and got 50. I only had 7 ones. So there are 57 students on the playground.

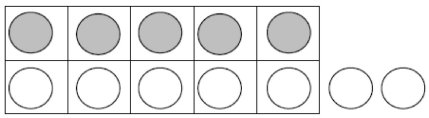


Student 3
I used mental math because I can count by 10s. I started at 37 and counted on 2 tens to get to 57. So, there are 57 students on the playground.

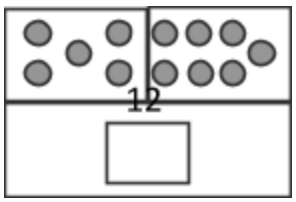
OA.4 Understand subtraction as an unknown-addend problem. ***For example, subtract 10 – 8 by finding the number that makes 10 when added to 8. Add and subtract within 20.***

This standard asks for students to use subtraction in the context of unknown addend problems. For example, 12 – 5 = __ could be expressed as 5 + __ = 12. Students should use cubes and counters, and representations such as the number line and the 100 chart, to model and solve problems involving the inverse relationship between addition and subtraction.

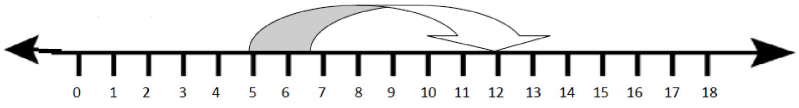
Student 1
I used a ten-frame. I started with 5 counters. I knew that I had to have 12, which is one full ten-frame and two left over. I needed 7 counters, so
12 – 5 = 7.



Student 2
I used a part-part-whole diagram. I put 5 counters on one side. I wrote 12 in the "total" section. I added counters to the other side until there were 12 in all. I had to put 7 counters on the other side, so
12 – 5 = 7.



Student 3:
I used a number line. I started at 5 and counted up until I reached 12. I counted 7 numbers, so I know that 12 – 5 = 7.



OA.5 Relate counting to addition and subtraction (e.g., by counting on 2 to add 2).

This standard asks for students to make a connection between counting and adding and subtracting. Students use various counting strategies, including counting all, counting on, and counting back with numbers up to 20. This standard calls for students to move beyond counting all and become comfortable at counting on and counting back. The counting all strategy requires students to count an entire set. The counting on and counting back strategies occur when students are able to hold the start number in their head and count on from that number.

Example: 5 + 2 = ___

Student 1: *Counting All*	Student 2: *Counting On*
5 + 2 = ___. The student counts five counters. The student adds two more counters. The student then counts 1, 2, 3, 4, 5, 6, 7 to get the answer.	5 + 2 = ___. Student counts five counters. The student adds another counter and says 6, then adds another counter and says 7. The student knows the answer is 7, since they counted on 2.

Example: 12 – 3 = ___

Student 1: *Counting All*	Student 2: *Counting Back*
12 – 3 = ___. The student counts twelve counters. The student removes 3 of the counters. The student counts the remaining counters by ones (1, 2, 3, 4, 5, 6, 7, 8, 9) to get the answer.	12 – 3 = ___. The student counts twelve counters. The student removes a counter and says 11, removes another counter and says 10, and removes a third counter and says 9. The student knows the answer is 9, since they counted back 3.

OA.8 Determine the unknown whole number in an addition or subtraction equation relating three whole numbers. ***For example, determine the unknown number that makes the equation true in each of the equations 8 + ? = 11, 5 = _ – 3, 6 + 6 = _.***

This standard builds upon the "think addition" for subtraction problems, or the idea of "fact families".

Example:

Student 1
5 = ___ – 3 I know that 5 plus 3 is 8. So 8 minus 3 is 5.