Grade 2 End-of-the Year Test

This test is quite long, so I do not recommend having the student do it in one sitting. Break it into parts and administer them either on consecutive days, or perhaps in the morning/evening/morning. Use your judgment.

This is to be used as a diagnostic test. Thus, you may even skip those areas and concepts that you already know for sure your student has mastered.

The test checks for all major concepts covered in *Math Mammoth Grade 2*. This test is evaluating the student's ability in the following content areas:

- basic addition and subtraction facts within 0-18
- three-digit numbers and place value
- regrouping in addition with two- and three-digit numbers
- regrouping in subtraction with two- and three-digit numbers, excluding regrouping two times
- addition and subtraction
- basic word problems
- measuring and drawing with a ruler, to the nearest centimeter
- names and usage of units for measuring length and weight
- names of basic shapes
- the concept of a fraction
- reading the clock to the nearest five minutes
- counting coins and banknotes
- the concept of multiplication

Note: Problems #1 and #2 are done orally and timed. Let the student see the problems. Read each problem aloud, and wait a maximum of 5 seconds for an answer. Mark the problem as right or wrong according to the student's (oral) answer. Mark it wrong if there is no answer. Then you can move on to the next problem.

You do not have to mention to the student that the problems are timed or that he/she will have 5 seconds per answer, because the idea here is not to create extra pressure by the fact it is timed, but simply to check if the student has the facts memorised (quick recall). You can say for example (vary as needed):

"*I will ask you some addition and subtraction questions. Try to answer them as quickly as possible. In each question, I will only wait a little bit for you to answer, and if you do not say anything, I will move on to the next problem. So just try your best to answer the questions as quickly as you can.*"

In order to continue with *Math Mammoth Grade 3*, I recommend that the student score at least 80% on this test, and that the teacher or parent revise with him any content areas in which he is weak. Students scoring between 70% and 80% may also continue with grade 3, depending on the types of errors (careless errors or not remembering something, versus lack of understanding). The most important areas to master are topics related to addition and subtraction, word problems, and place value. Again, use your judgment.

My suggestion for grading is below. The total is 134 points. A score of 107 points is 80%.

Question	Max. points	Student score
Basic Addition and Subtraction Facts		
1	16 points	
2	16 points	
3	6 points	
	subtotal	/ 38
Mental Addition and Subtraction with Two-Digit Numbers and Word Problems		
4	1 point	
5	2 points	
6	3 points	
7	1 point	
8	3 points	
9	3 points	
10	6 points	
	subtotal	/ 19
Three-Digit Numbers		
11	2 points	
12	2 points	
13	2 points	
14	6 points	
15	4 points	
	subtotal	/ 16
Regrouping in Addition and Subtraction, Including Word Problems		
16	3 points	
17	4 points	
18	2 points	
19	2 points	
20	2 points	
21	3 points	
	subtotal	/ 16

Question	Max. points	Student score
Clock		
22	6 points	
23	5 points	
	subtotal	/ 11
Money		
24	2 points	
25	2 points	
26	2 points	
	subtotal	/ 6
Geometry and Measuring		
27	2 points	
28	4 points	
29	1 point	
30	4 points	
	subtotal	/ 11
Fractions		
31	4 points	
32	6 points	
	subtotal	/ 10
Concept of Multiplication		
33	2 points	
34	2 points	
35	3 points	
	subtotal	/ 7
	TOTAL	**/ 134**

End of Year Test - Grade 2

Basic Addition and Subtraction Facts

In problems 1 and 2, your teacher will read you the addition and subtraction questions. Try to answer them as quickly as possible. In each question, he/she will only wait a little while for you to answer, and if you don't say anything, your teacher will move on to the next problem. So just try your best to answer the questions as quickly as you can.

1. Add.

a.	b.	c.	d.
6 + 7 = _____	7 + 4 = _____	8 + 8 = _____	9 + 5 = _____
9 + 9 = _____	5 + 8 = _____	6 + 6 = _____	7 + 7 = _____
5 + 6 = _____	3 + 9 = _____	2 + 9 = _____	8 + 6 = _____
8 + 7 = _____	5 + 7 = _____	4 + 8 = _____	8 + 9 = _____

2. Subtract.

a.	b.	c.	d.
12 – 3 = _____	11 – 3 = _____	14 – 5 = _____	13 – 4 = _____
15 – 7 = _____	12 – 8 = _____	12 – 4 = _____	15 – 6 = _____
13 – 6 = _____	14 – 6 = _____	18 – 9 = _____	12 – 6 = _____
11 – 7 = _____	16 – 8 = _____	16 – 7 = _____	14 – 7 = _____

3. Fill in the missing numbers. The four problems form a fact family.

a.	b.	c.
2 + ☐ = 11	____ + ____ = 17	____ + ____ = ____
☐ + 2 = 11	____ + ____ = 17	____ + ____ = ____
11 – 2 = ☐	17 – 8 = ____	12 – ____ = 5
11 – ☐ = 2	17 – ____ = ____	____ – ____ = ____

Mental Addition and Subtraction with Two-Digit Numbers and Word Problems

4. What is double 35?

5. Mary picked 5 apples and Bill picked 9. The children shared all of their apples evenly. How many did each child get?

6. List here the even numbers from 10 to 20.

7. Find the difference of 75 and 90.

8. Ed had saved $16. Then grandma gave him $10. Now how much more does he need in order to buy a toolset for $32?

9. Find the missing numbers.

a. 82 + _____ = 90 **b.** 13 + _____ = 21 **c.** 90 – _____ = 83

10. Calculate mentally.

a. 59 + 8 = _____ 62 + 8 = _____	**b.** 52 + 40 = _____ 45 + 9 = _____	**c.** 76 – 50 = _____ 54 – 23 = _____

Three-Digit Numbers

11. Write with numbers.

a. 6 tens 2 hundreds 7 ones = _____ **b.** 8 ones 9 hundreds = _____

12. Skip-count by tens.

568, 578, _____, _____, _____, _____, _____

13. Write the numbers in order from the smallest to the greatest.

a. 417, 714, 447	**b.** 89, 998, 809

14. Calculate mentally.

a. 560 + 40 = _____ 560 + 400 = _____	**b.** 520 – 20 = _____ 520 – 200 = _____	**c.** 362 – 30 = _____ 362 – 300 = _____

15. Compare the expressions and write < , > , or = .

a. 100 – 5 – 3 ☐ 98 – 6

b. 40 + 8 + 200 ☐ 20 + 800 + 4

c. 50 + 120 ☐ 125

d. $\frac{1}{2}$ of 800 ☐ 399 + 5

Regrouping in Addition and Subtraction, including Word Problems

16. Add.

a.
$$\begin{array}{r} 35 \\ 36 \\ +\ 12 \\ \hline \end{array}$$

b.
$$\begin{array}{r} 224 \\ +\ 458 \\ \hline \end{array}$$

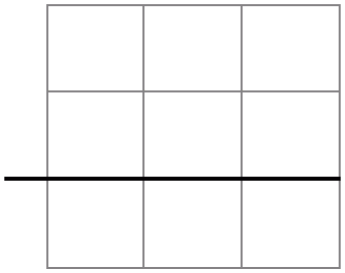
c.
$$\begin{array}{r} 438 \\ 17 \\ +\ 293 \\ \hline \end{array}$$

17. Subtract. Check by adding the result and what was subtracted.

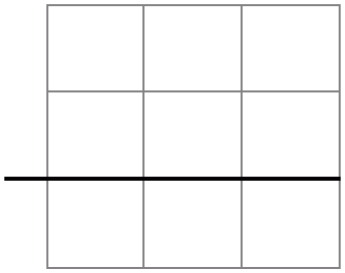
a.
$$\begin{array}{r} 61 \\ -\ 37 \\ \hline \end{array} \qquad + \_\_\_\_$$

b.
$$\begin{array}{r} 970 \\ -\ 248 \\ \hline \end{array} \qquad + \_\_\_\_$$

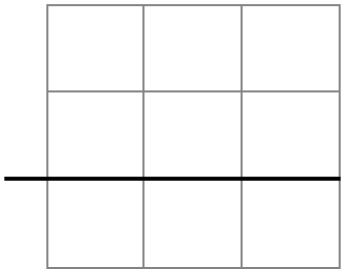
18. Jennifer bought two vacuum cleaners for $152 each.
What was the total cost?



19. A box contains 450 disks in all. Of them,
126 are music CDs and the rest are DVDs.
How many DVDs are in the box?



20. The distance from Mark's home to
his grandma's house is 218 miles.
How many miles long is a round trip?



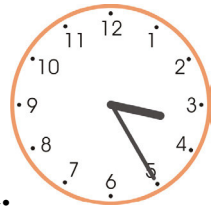
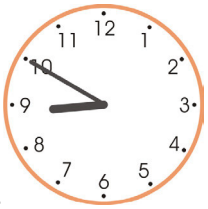
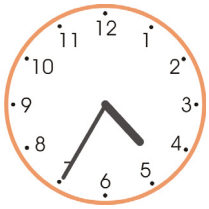
21. Every day Janet jogs around a rectangular-shaped jogging track. One side is 150 yards and another side is 300 yards.

a. Mark the distances in the picture.

b. Calculate what distance Janet goes when she jogs around it once.

Clock

22. Write the time with *hours:minutes*, and using "past" or "till".

a.  _____ : _____ _____ past _____	**b.**  _____ : _____ _____	**c.**  _____ : _____ _____

23. How much time passes? Fill in the table.

from	3:00	2:00	1 AM	11 AM	8 PM
to	3:05	2:30	8 AM	1 PM	midnight
amount of time					

Money

24. How much money? Write the amount.

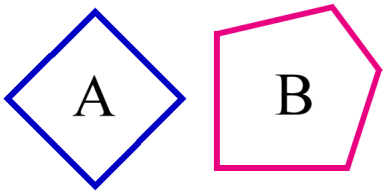
 **a.** $_____	 **b.** $_____

25. Find the change, if you buy a meal for $3.35
and you pay with $4.

26. Bill bought an eraser that cost 85¢. He paid with $1.
What was his change?

Geometry and Measuring

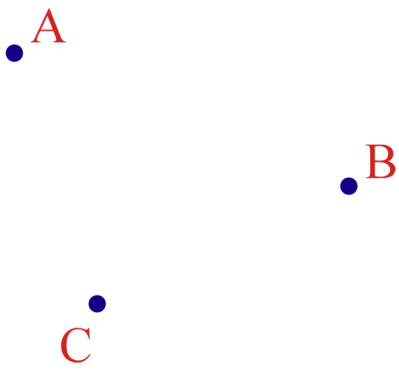
27. Identify the shapes.



Shape A: _____

Shape B: _____

28. **a.** Join the dots in order (A-B-C-D) with straight lines. Use a ruler.



b. What shape is formed?

_____

c. Measure the sides of the shape to the nearest half-inch.

Side AB: about _____ Side BC: about _____

Side CD: about _____ Side DA: about _____

29. Measure this line to the nearest centimeter.

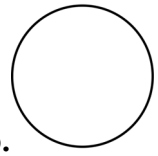
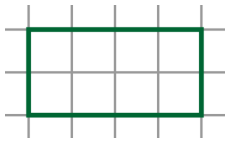
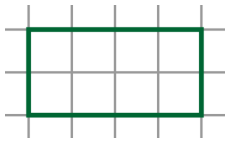
about _____ cm

30. Which measuring unit or units could you use to find these amounts? Centimeter (cm), inch (in), meter (m), foot (ft), mile (mi), or kilometer (km)? Sometimes two different units are possible. If so, write both.

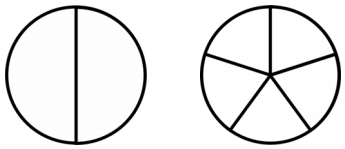
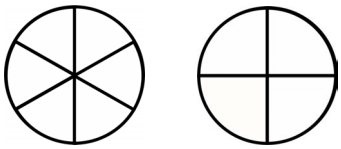
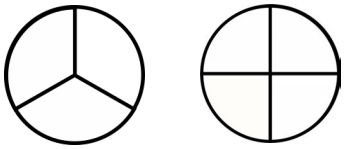
Distance	Unit(s)
how long my pencil is	
the distance from London to New York	
the height of a wall	
the distance it is to the neighbor's house	

Fractions

31. Divide these shapes. Then color as you are asked to.

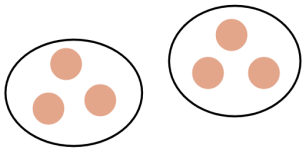
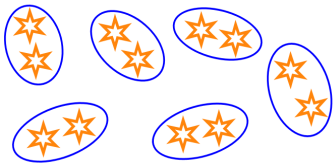
a.  Divide this into thirds. Color $\frac{2}{3}$.	**b.**  Divide this into halves. Color $\frac{1}{2}$.	**c.**  Divide this into halves. Color $\frac{2}{2}$.	**d.**  Divide this into fourths. Color $\frac{3}{4}$.

32. Color. Then compare and write < , > , or = between the fractions.

a.  $\frac{1}{2}$ $\frac{2}{5}$	**b.**  $\frac{4}{6}$ $\frac{3}{4}$	**c.**  $\frac{2}{3}$ $\frac{2}{4}$

Concept of Multiplication

33. Write a multiplication sentence for each picture.

 **a.** _____ × _____ = _____	 **b.** _____ × _____ = _____

34. Write a <u>multiplication</u> for each addition, and solve.

a. 5 + 5 + 5 _____ × _____ = _____	**b.** 4 + 4 + 4 + 4 + 4 _____ × _____ = _____

35. Solve.

a. 2 × 5 = _____	**b.** 3 × 3 = _____	**c.** 3 × 10 = _____