math MAMMOTH

Math Mammoth Grade 5 Review Workbook

- The four operations
- Large numbers and the calculator
- Problem solving
- Decimals
- Graphing and statistics
- Fractions: add and subtract
- Fractions: multiply and divide
- Geometry

By Maria Miller

Math Mammoth Grade 5 Review Workbook

Contents

Introduction

This workbook is intended to give students a thorough review of 5th grade math. It has both topical as well as mixed (spiral) review worksheets, and includes both topical tests and a comprehensive end-of-the-year test. The tests can also be used as review worksheets, instead of tests.

You can use this workbook for various purposes: for summer math practice, to keep the child from forgetting math skills during other break times, to prepare students who are going into sixth grade, or to give fifth grade students extra practice during the school year.

The topics reviewed in this workbook are:

- the four operations
- large numbers and the calculator
- problem solving
- decimals
- graphing and statistics
- fractions: add and subtract
- fractions: multiply and divide
- geometry

In addition to the topical reviews and tests, the workbook also contains many cumulative (spiral) review pages.

The content for these is taken from the *Math Mammoth Grade 5 Complete Curriculum*, so this workbook works especially well to prepare students for grade 6 in Math Mammoth. However, the content follows a typical study for grade 5, so this workbook can be used no matter which math curriculum you follow.

Please note this book does not contain lessons or instruction for the topics. It is not intended for initial teaching. It also will not work if the student needs to completely re-study these topics (the student has not learned the topics at all). For that purpose, please consider *Math Mammoth Grade 5 Complete Curriculum*, which has all the necessary instruction and lessons.

I wish you success with math teaching!

Maria Miller, the author

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Mixed Review 4

1. Divide. Use the space on the right for building a multiplication table of the divisor. Then check.

2 × 21 = 42	21) 8 1 6 9	× 2 1

2. Solve in the right order. First, you can enclose the operation to be done in a "bubble" or a "cloud."

a. 94 + 12 × 5 ÷ 2 = _____	**b.** (22 − 9) × 2 + 58 = _____
c. 43 + (55 + 5) ÷ 5 = _____	**d.** 700 − 30 × (3 + 4) = _____

3. Solve mentally.

a. 43 – 17 = _____ 71 – 43 = _____	**b.** 54 – 19 + 12 = _____ 85 – 25 + 75 = _____	**c.** 1,200 – _____ = 750 2,000 – 800 – _____ = 600

4. Write the numbers.

a. 78 billion 38 16 thousand

b. 844 billion 12 million 704

5. Round these numbers to the nearest thousand, nearest ten thousand, nearest hundred thousand, and nearest million.

number	32,274,302	64,321,973	388,491,562	2,506,811,739
to the nearest 1,000				
to the nearest 10,000				
to the nearest 100,000				
to the nearest million				

6. Complete the addition path using mental math.

7. Write an expression to match each written sentence.

a. The product of 5 and 6 is added to 50.	**b.** The difference of 9 and 6 is subtracted from 10.

8. Write a single expression using numbers and operations for the problem, not just the answer!

A teacher bought 21 notebooks for $2 each, 20 rulers for $1.50 each, and chalk for $12.
What was the total cost?

9. Add.

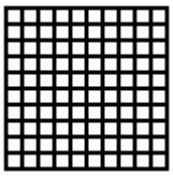
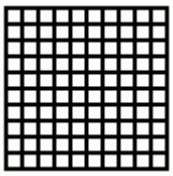
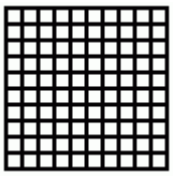
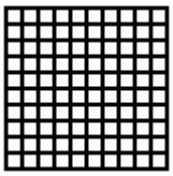
a. 521,607,090 + 4,293,991,092	**b.** 77,630,087 + 884,000,299 + 84,926,571

10. Estimate first, using mental math. Then find the exact answer and the error of your estimation using a calculator.

a. 2,933 × 213	**b.** 152 × 89 × 7,932
My estimation: _____	My estimation: _____
Exact answer: _____	Exact answer: _____
Error of estimation: _____	Error of estimation: _____

Decimals Review

1. Color parts to show the decimals.

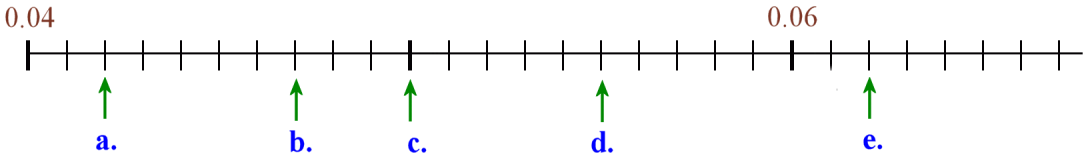
 **a.** 0.2 + 0.04	 **b.** 0.09 + 0.05	 **c.** seven hundredths	 **d.** 0.6

2. Write in expanded form.

a. 0.495

b. 2.67

3. Write the decimals indicated by the arrows.



a. _____ **b.** _____ **c.** _____ **d.** _____ **e.** _____

4. Compare using < , = and > .

a. 0.25 ☐ 0.215	**b.** 0.3 ☐ 0.19	**c.** 4.033 ☐ 4.33	**d.** 0.65 ☐ $\frac{1}{2}$	**e.** 0.065 ☐ 0.2

4. Write as decimals.

a. $\frac{3}{100}$ = _____ **b.** $\frac{48}{1000}$ = _____ **c.** $1\frac{209}{1000}$ = _____ **d.** $3\frac{39}{100}$ = _____

5. Write as fractions or mixed numbers.

a. 1.3 **b.** 2.15

c. 0.008 **d.** 0.038

6. Round the numbers to the nearest one, to the nearest tenth, and to the nearest hundredth.

rounded to...	nearest one	nearest tenth	nearest hundredth
4.608			
3.109			
2.299			
0.048			

7. Add and subtract.

a. 0.3 + 0.005 = _____ 0.03 + 0.5 = _____	**b.** 0.9 − 0.7 = _____ 0.9 − 0.07 = _____
c. 0.008 + 0.9 + 5 = _____ 0.9 + 0.8 + 0.17 = _____	**d.** 2.5 − 1.02 = _____ 7.8 − 0.9 − 0.04 = _____

8. Complete the addition sentences.

a. 0.21 + _____ = 1	**b.** 0.004 + _____ = 1	**c.** 4.391 + _____ = 5

9. **a.** Find the number that is 5 hundredths and 7 tenths *more* than 3.194.

b. Find the number that is 3 thousandths and 8 tenths *less* than 0.902.

10. Five children divided $25 equally, and then each one bought ice cream for $2.05.

a. *Estimate* how much each child has left now.

b. Choose an expression that matches the problem.

c. Find the exact amount that each child has left now.

25 – $2.05 ÷ 5
25 ÷ 5 – $2.05
25 – 5 × $2.05

11. Solve.

a. 0.4 × 8 = _____	**c.** 20 × 0.5 = _____	**e.** 0.9 × 0.2 = _____
b. 6 × 0.009 = _____	**d.** 100 × 0.3 = _____	**f.** 0.06 × 0.3 = _____

12. Divide.

a. $0.35 \div 5 =$ _____	**c.** $0.4 \div 10 =$ _____	**e.** $0.38 \div 10 =$ _____
b. $4.5 \div 9 =$ _____	**d.** $5 \div 100 =$ _____	**f.** $7 \div 1000 =$ _____

13. Find the missing factors.

a. $0.8 \times$ _____ $= 0.40$	**c.** $7 \times$ _____ $= 3.5$	**e.** $0.9 \times$ _____ $= 7.2$
b. $8 \times$ _____ $= 0.064$	**d.** $0.6 \times$ _____ $= 0.024$	**f.** $9 \times$ _____ $= 0.81$

14. Multiply and divide using powers of ten.

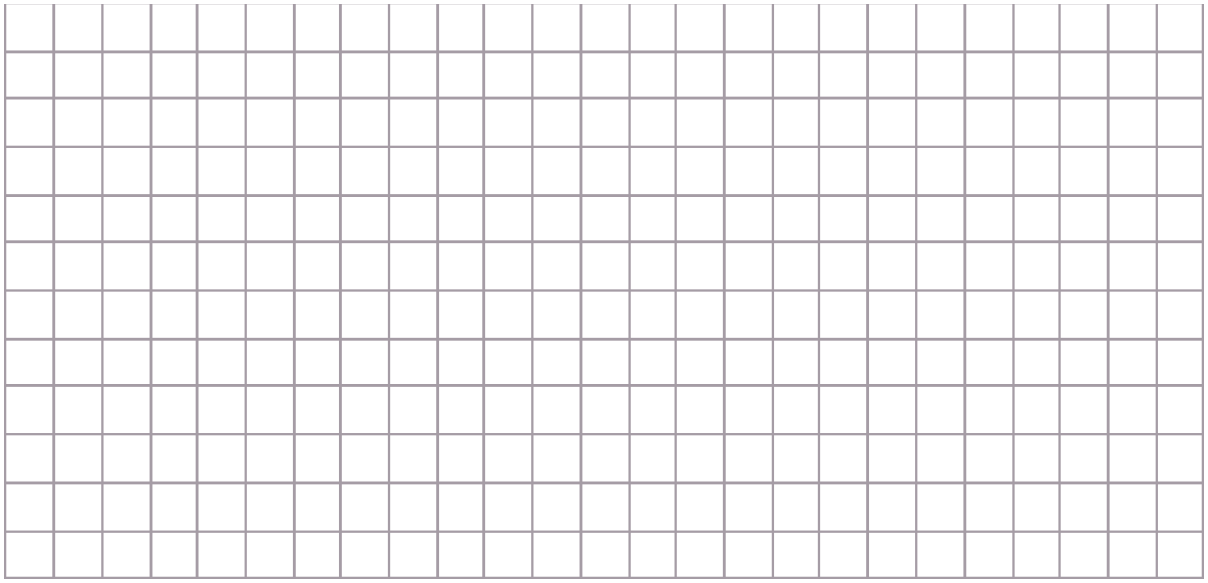
a. $0.07 \times 10^2 =$ _____	**b.** $3{,}300 \div 10^4 =$ _____
$10^5 \times 1.08 =$ _____	$239.8 \div 10^3 =$ _____

15. Use decimal multiplication to find these amounts.

a. 7/10 of 5 kg	**b.** 6/100 of 1.2 meters	**c.** 35/100 of 2 liters

16. Multiply and divide. Use the grid.

a. 2.3×0.79 **b.** $2.485 \div 7$ **c.** $17.0 \div 20$



17. Is the answer to 0.4 × 0.7 less than or more than 0.7?

    Explain in your own words why that is so.

18. A bicycle that costs $126 is discounted by 2/10 of its price.
    Find the discounted price.

19. Multiply both the dividend and the divisor by 10, repeatedly, until you get a *whole-number divisor*.
    Then, divide using long division. If the division is not even, round the answer to two decimals.

a. 152.8 ÷ 0.4	**b.** 2.776 ÷ 0.08
c. 180 ÷ 1.1	**d.** 2 ÷ 7

20. Convert.

a. 0.9 m = _____ cm 45 cm = _____ m 1.5 km = _____ m	**b.** 0.6 L = _____ ml 5,694 ml = _____ L 0.09 L = _____ ml	**c.** 2.2 kg = _____ g 390 g = _____ kg 0.02 kg = _____ g

21. Convert.

a. 6 ft 11 in. = _____ in. 3 lb 11 oz = _____ oz 3 C = _____ oz	**b.** 2 gal = _____ C 5 qt = _____ pt 54 oz = _____ C _____ oz	**c.** 78 oz = _____ lb _____ oz 39 in = _____ ft _____ in 102 in = _____ ft _____ in

22. Convert. Use a calculator, but only in this problem!

a. 2.65 mi. = _____ ft 10.9 mi = _____ yd	**b.** 3,800 ft = _____ mi 3,500 yd = _____ mi	**c.** 4.54 lb = _____oz 10.2 ft = _____in

23. Twenty-six kilograms of strawberries are packaged evenly into five boxes.

a. How much does each box weigh?

b. If the strawberries cost $3 per kilogram, how much does one box cost?

24. Edward earns $11.75 per hour. Find his earnings in a 38-hour week. Then figure out what he takes home after paying 1/5 of it in taxes.

25. Two pitchers hold a total of 3.65 liters. The smaller pitcher holds 0.55 L less than the larger one. Find the individual volumes of the two pitchers.

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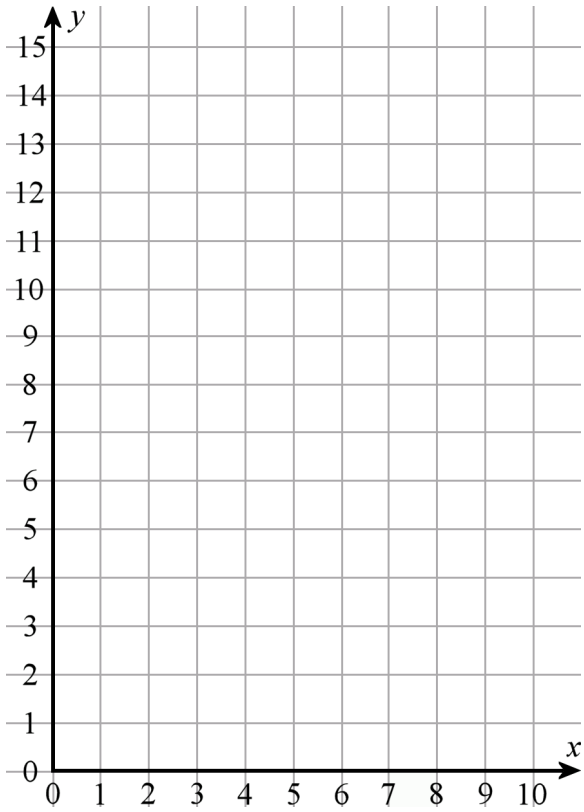
Graphing and Statistics Test

1. Plot the point (9, 5) on the grid. Then, plot the point that is two units down and four units to the left from that point. What are its coordinates?



2. Plot the points from the "number rule" on the coordinate grid. Fill in the rest of the table first, using the rule.

   The rule is: $y = 2x - 1$.

x	1	2	3	4
y				

x	5	6	7	8
y				

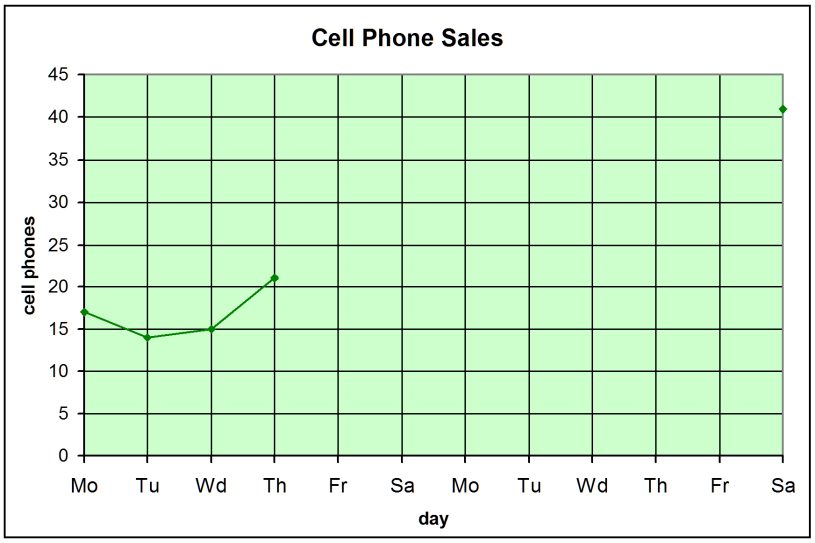
3. A cell phone store kept track of how many cell phones they sold each day of the week ("units sold"). A certain day they started a promotion with 3/10 off of the normal price.

   a. Add the number labels for the vertical axis next to the tick marks (the scaling).

   b. Plot the remaining points and finish the line graph.

   c. Which day did the promotion most likely start?

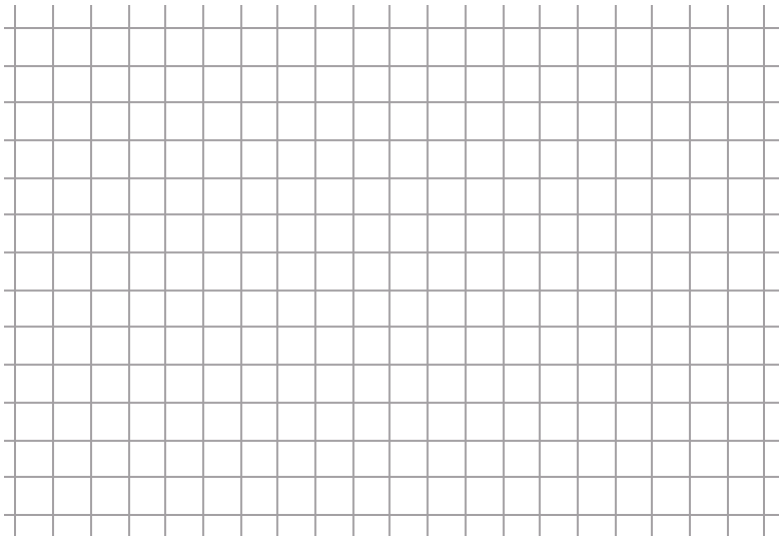
Day	Units sold
Mo	17
Tu	14
Wd	15
Th	21
Fr	19
Sa	23
Mo	15
Tu	34
Wd	40
Th	37
Fr	33
Sa	41



4. Mary asked 20 people in a club how old they were (in years). Here is her data:
10, 9, 10, 12, 15, 8, 9, 10, 11, 13, 11, 10, 9, 12, 9, 13, 11, 10, 15, 14
(Each number is the response from one person.)

a. Fill in the frequency table. Make four categories. Draw a bar graph.

Age	frequency

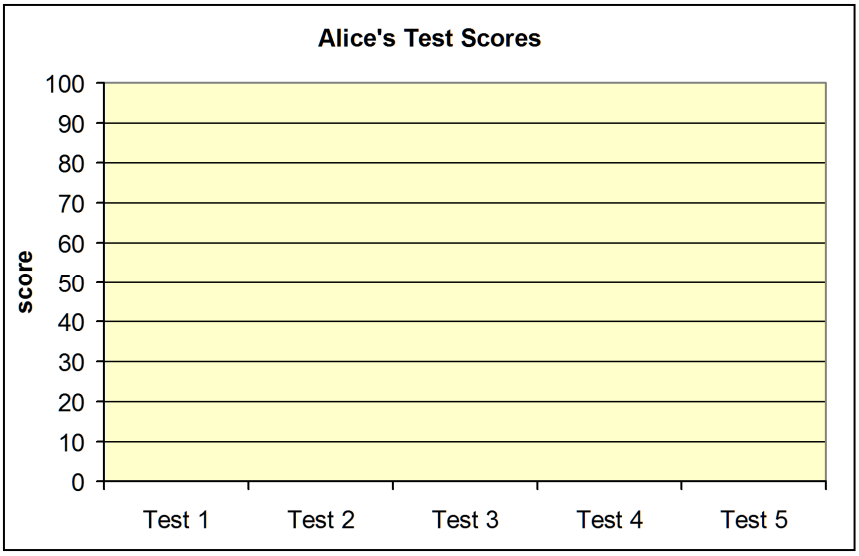


b. What is the mode of this data set?

c. Find the average.

5. The chart shows Alice's science test scores for five different tests.

Alice's test scores	
Test 1	76
Test 2	66
Test 3	74
Test 4	81
Test 5	88



a. Draw a line graph.

b. Calculate the average.

c. Plot the average in the line graph.

d. If the test where Alice scored the worst was dismissed and not taken into account, what would Alice's average score be?