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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-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 teaching math!

Maria Miller, the author

Large Numbers and the Calculator Review

1. Write the numbers.

- a. 560 70 thousand 9 million
- b. 60 million 5 hundred 7 thousand 4 tens
- c. 50 billion 50 50 thousand
- d. 98 million 431 billion 940

2. What is the *place* and the *value* of the underlined digit?

a. 405,2 <u>2</u> 9,020 Place: _____ Value: _____	b. 97,02 <u>4</u> ,003,245 Place: _____ Value: _____
c. <u>2</u> 30,560,079,000 Place: _____ Value: _____	d. 4, <u>5</u> 89,211,000 Place: _____ Value: _____

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

number	69,066	389,970,453	12,976,895,322
to the nearest 1,000			
to the nearest 10,000			
to the nearest 100,000			
to the nearest million			

4. Read the powers aloud, and solve.

a. $8^2 =$ _____	d. $1^5 =$ _____
b. $4^3 =$ _____	e. $100^2 =$ _____
c. $10^3 =$ _____	f. $2^5 =$ _____



5. Write using exponents, and solve.

<p>a. five to the third power =</p>	<p>c. $2 \times 2 \times 2 \times 2 \times 2 \times 2 =$</p>
<p>b. $10 \times 10 \times 10 \times 10 =$</p>	<p>d. ten to the sixth power =</p>

6. Calculate the products.

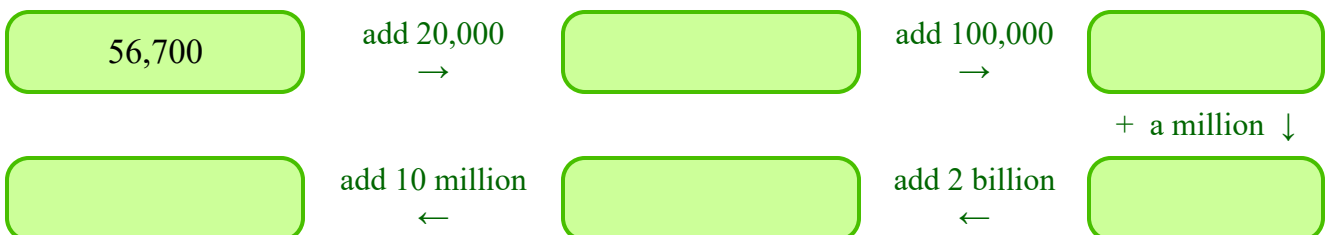
<p>a. 8×10^5</p>	<p>b. 247×10^8</p>
<p>c. $2,109 \times 10^4$</p>	<p>d. $200 \times 110,000$</p>
<p>e. $30 \times 200 \times 600$</p>	<p>f. $50,000 \times 200,000$</p>

7. Find the missing factor.

<p>a. _____ $\times 5,609 = 5,609,000$</p>	<p>b.   $\times 39,007 = 3,900,700,000$</p>
---	--

8. Add $7,890,483 + 32,930 + 155,670$ without using a calculator.
Then check your answer with it.

9. Complete the addition path.





10. In 2020, the money spent to educate one pupil for one year in a public school in the USA was \$13,494. There were about 3,704,000 fifth-graders in the public schools of the country. Find out, to the nearest billion, how much money was spent to educate them.



11. In 2021, there were about 41,300 new vehicles sold each day, on average, in the United States. Calculate about how many vehicles were sold during that year. Give your answer to the nearest hundred thousand.



12. First estimate the answer. Then calculate the exact answer using a calculator.

<p>a. What is the total cost of buying 12 flash drives for \$26.95 apiece?</p> <p>My estimation: _____</p> <p>_____</p> <p>Exact answer: _____</p>	<p>b. Find the change you get, if you buy gasoline for \$115.67 and coffee for \$12.55, and pay with \$200.</p> <p>My estimation: _____</p> <p>_____</p> <p>Exact answer: _____</p>
---	--

<p><i>Who am I?</i></p> <p>Mystery Number 38 2 1 99 47 101</p> <p>a. My digit in the ten thousands place is double the digit in the tens place.</p> <p>The digits in the tens and hundreds places add up to 7.</p> <p>I have 2 in the millions place.</p> <p>In the hundred thousands place, I have an even digit that is less than 4 but more than 0.</p> <p>All the rest of my digits are zeros.</p> <p>All total, my digits add up to 17.</p>	<p><i>Who am I?</i></p> <p>Mystery Number 38 2 1 99 47 101</p> <p>b. I have the same digit in the thousands, millions, and ones places, and those add up to 9.</p> <p>The tens digit is four times the ten thousands digit, and both are even numbers more than zero.</p> <p>The hundred thousands digit and hundreds digit add up to 1, the former being less than the latter.</p>
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Mixed Review 2

1. Place parentheses into these equations to make them true.

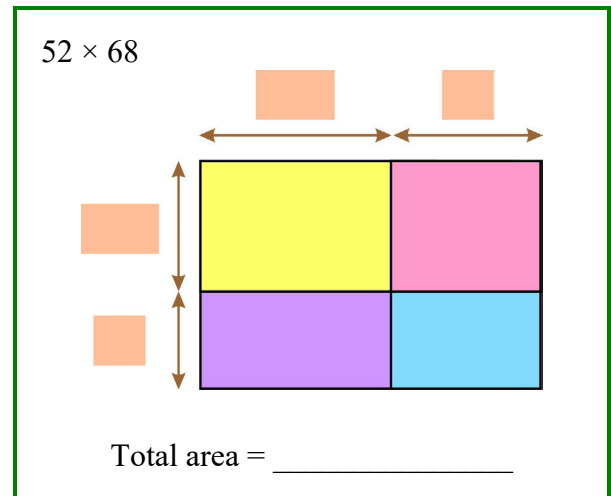
a. $90 + 70 + 80 \times 2 = 390$

b. $378 = 6 \times 8 + 13 \times 3$

c. $90 \times 4 = 180 - 60 \times 3$

2. Fill in the numbers into the boxes on the top and on the left side of the large rectangle. Then multiply, and write the area of each part inside it. Lastly calculate the total by adding.

(It won't matter which number you choose for the horizontal and which for the vertical side.)



3. Divide. Use the space on the left for building a multiplication table of the divisor. Lastly, check.

$2 \times 15 = 30$	<p>a. $15 \overline{)9450}$</p>	$\begin{array}{r} \times 15 \\ \hline \end{array}$
	<p>b. $14 \overline{)4508}$</p>	$\begin{array}{r} \times 14 \\ \hline \end{array}$

4. Solve the word problems.

a. Jim earned a total of \$1,920 dollars in four weeks.
How much did he earn in one week?

b. Joe entered his sled and dogs in 11 races last year.
The races were all held on the same 136-mile race course.
How many miles total did Joe and his dogs race last year?

5. Which expression(s) match the problem? Also, solve the problem.

Greg bought four flashlights
for \$9 each, and paid with \$50.
What was his change?

(1) $\$50 - \$9 + \$9 + \$9 + \$9$

(4) $4 \times \$9 - \50

(2) $\$50 - (\$9 - \$9 - \$9 - \$9)$

(5) $\$50 - 4 \times \9

(3) $\$50 - (\$9 + \$9 + \$9 + \$9)$

(6) $\$50 + 4 - \9

6. First, estimate the answer to the multiplication problem. Then multiply.

a. Estimate: _____

$$\begin{array}{r} 173 \\ \times 35 \\ \hline \end{array}$$

b. Estimate: _____

$$\begin{array}{r} 269 \\ \times 537 \\ \hline \end{array}$$

c. Estimate: _____

$$\begin{array}{r} 892 \\ \times 340 \\ \hline \end{array}$$

Mixed Review 6

1. Calculate.

<p>a. $2 \times 10^4 =$ _____</p> <p>$43 \times 10^5 =$ _____</p>	<p>b. $3,090 \times 10^6 =$ _____</p> <p>$10^8 \times 304 =$ _____</p>
--	---

2. Jack earned \$125 and his sister earned $\frac{4}{5}$ as much. How much did Jack and his sister earn together?



Mark the information in the bar model, and solve.

3. In what place is the underlined digit? What is its value?

<p>a. 791,4<u>5</u>6,030</p> <p>Place: _____</p> <p>Value: _____</p>	<p>b. 2,09<u>4</u>,806,391</p> <p>Place: _____</p> <p>Value: _____</p>
---	---

4. Ann is an English teacher. She has 150 students in her English classes this year, and $\frac{6}{50}$ of them were not in her classes last year.

a. How many new students does she have?

b. Out of the new students, $\frac{1}{3}$ have never studied English before. How many of the new students have studied English before?

5. Mark an “x” if the number is divisible by 2, 3, 4, 5, 6, or 9.

Divisible by	2	3	4	5	6	9
692						
3,072						

Divisible by	2	3	4	5	6	9
702						
91						

6. Find all the factors of the given numbers. Use the checklist, and keep track of *all* the factors you find.

<p>a. 35</p> <p>Check 1 2 3 4 5 6 7 8 9 10</p> <p>factors: _____</p>	<p>b. 40</p> <p>Check 1 2 3 4 5 6 7 8 9 10</p> <p>factors: _____</p>
---	---

7. Solve for the unknown N or M.

a. $4 \times M = 200$	b. $M \div 6 = 8$	c. $4,500 \div M = 50$
d. $7 \times N = 56,000$	e. $N \div 30 = 700$	f. $48,000 \div N = 600$

8. Write an expression to match each written sentence.

a. The quotient of 350 and x equals 5.	b. The difference of 15 and 6 is added to 8.
---	---

9. Find a number to fit in the box so the equation is true.

a. $36 = (\square + 9) \times 3$	b. $7 \times 7 = 4 \times \square + 5$	c. $19 = (84 \div \square) - 2$
---	---	--

10. Round the numbers as indicated.

<i>number</i>	97,302	709,383,121	89,534,890,066
to the nearest 1,000			
to the nearest 10,000			
to the nearest 100,000			
to the nearest million			

Decimals 2 Review

1. Multiply.

a. $0.4 \times 0.6 =$ _____	b. $1.2 \times 0.5 =$ _____	c. $0.6 \times 0.09 =$ _____
-----------------------------	-----------------------------	------------------------------

2. 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. $7 \div 1000 =$ _____

3. 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. $9 \times$ _____ $= 0.81$

4. Multiply and divide using powers of ten.

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

5. 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
-------------------	--------------------------	-------------------------

6. Is the answer to 0.4×34.5 less than or more than 34.5?

Explain in your own words why that is so.

11. Divide using long division. If the division is not even, round the answer to two decimals.

a. $152.8 \div 0.4 =$ _____

) _____

Check:

b. $2.776 \div 0.08 =$ _____

) _____

Check:

c. $2 \div 7 =$ _____

) _____

Check:

12. A sheet of paper weighs 0.006 kg. How many such papers can you mail if there is a 0.400 kg weight limit?

13. 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
---	---	---

14. Convert.

a. 56 cg = _____ g	c. 304 dl = _____ L	e. 0.49 hm = _____ cm
b. 493 L = _____ kL	d. 0.08 kg = _____ cg	f. 58,400 mm = _____ dam

km	hm	dam	m	dm	cm	mm

kl	hl	dal	L	dl	cl	ml

kg	hg	dag	g	dg	cg	mg

15. 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
--	--	--

16. Convert. Use a calculator, but only for 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
--	--	--

17. Jack knows that the width of his fathom, or fully outstretched arms from fingertip to fingertip, is 146 cm. Jack measures the width of his room using his fathom, and finds out it is about $2\frac{1}{2}$ of his fathoms. Find the width of the room in meters.

Note: Since the width is *about* $2\frac{1}{2}$ Jack's fathoms, don't give your final answer as an exact number: round it to the nearest tenth of a meter.

18. 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.

Mixed Review 9

1. In what place is the underlined digit? What is its value? (The Place Value System/Ch.2)

a. 452,9 <u>1</u> 2,980 Place: _____ Value: _____	b. <u>6</u> ,219,455,221 Place: _____ Value: _____
--	---

2. The Hewitt family have home school all but 12 weeks of the year, five days a week, about five hours a day. How many hours of school do they have in a year?

3. Find all the factors of the given numbers. (Review: Factors and Primes/Ch.1)

a. 50 Check 1 2 3 4 5 6 7 8 9 10 factors: _____	b. 84 Check 1 2 3 4 5 6 7 8 9 10 factors: _____
--	--

4. Write the numbers in expanded form. (More Decimals: Thousandths/Ch.4 and The Place Value System/Ch2)

a. 0.28

b. 60.068

c. 40,308,270

5. One cup of plain yogurt costs \$2.40, a cup of strawberry yogurt costs \$0.15 less than plain yogurt, and a cup of plum yogurt costs \$0.30 more than plain yogurt. What is the total cost if you buy one cup of each kind of yogurt?

6. Write in order from the smallest to the greatest number. (Comparing Decimals/Ch.4)

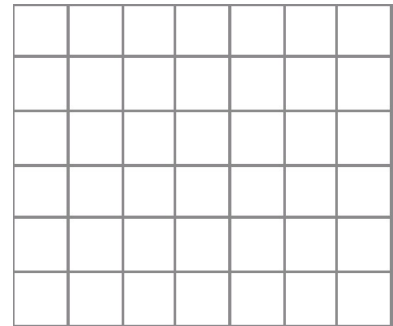
a. 4.2 0.42 0.402 4.02 0.442	b. 0.95 0.9 0.905 0.955 0.59 0.509
---	---

7. Divide using mental math. (Divide Decimals by Whole Numbers 2/Ch.4)

a. $5.6 \div 8 =$ _____	d. $2.4 \div 4 =$ _____	g. $0.064 \div 8 =$ _____
b. $0.56 \div 8 =$ _____	e. $0.45 \div 9 =$ _____	h. $0.49 \div 7 =$ _____
c. $0.056 \div 8 =$ _____	f. $0.40 \div 10 =$ _____	i. $0.080 \div 10 =$ _____

8. **a.** Estimate with mental math how many \$5.45 mugs you can buy with \$30.

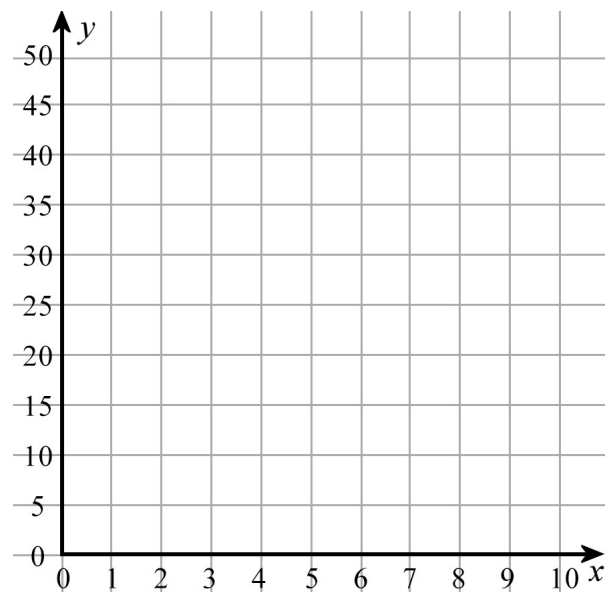
b. Now find the exact price of that many mugs, and your change from \$30.



9. Plot the points on the coordinate grid, then join them in order with line segments.

(Number Patterns/Ch.5)

(3, 20), (3, 45), (5.5, 40), (8, 45), (8, 20), (5.5, 25) and (3, 20) again, to close the figure.



Fractions: Add and Subtract Test

1. Write as mixed numbers.

a. $\frac{26}{3}$

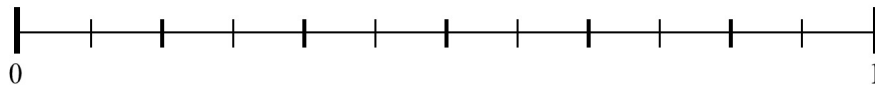
b. $\frac{45}{7}$

c. $\frac{34}{5}$

2. Add or subtract.

<p>a.</p> $\begin{array}{r} 7\frac{6}{8} \\ + 2\frac{5}{8} \\ \hline \end{array}$	<p>b.</p> $\begin{array}{r} 6\frac{1}{5} \\ - 3\frac{4}{5} \\ \hline \end{array}$	<p>c.</p> $\begin{array}{r} 4\frac{6}{11} \\ 9\frac{9}{11} \\ + 2\frac{4}{11} \\ \hline \end{array}$
---	---	--

3. Mark the fractions on the number line. $\frac{2}{3}, \frac{5}{6}, \frac{7}{12}, \frac{3}{4}, \frac{11}{12}$



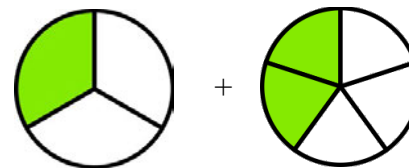
4. If you can find an equivalent fraction, write it. If you cannot, cross out the whole problem.

a. $\frac{3}{7} = \frac{\quad}{21}$	b. $\frac{4}{3} = \frac{\quad}{18}$	c. $\frac{5}{6} = \frac{\quad}{11}$	d. $\frac{2}{5} = \frac{8}{\quad}$	e. $\frac{5}{6} = \frac{15}{\quad}$
-------------------------------------	-------------------------------------	-------------------------------------	------------------------------------	-------------------------------------

5. Compare the fractions, and write $<$, $>$, or $=$ in the box.

a. $\frac{7}{4} \square \frac{5}{3}$	b. $\frac{5}{11} \square \frac{1}{2}$	c. $\frac{7}{10} \square \frac{69}{100}$	d. $\frac{3}{4} \square \frac{75}{100}$	e. $\frac{8}{7} \square \frac{7}{9}$
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6. Draw something in the picture and explain how we can add $\frac{1}{3}$ and $\frac{2}{5}$.



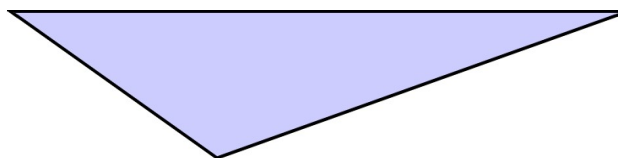
7. Add and subtract.

a. $\frac{2}{3} + \frac{3}{4}$	b. $\frac{5}{6} - \frac{2}{3}$
c. $3\frac{1}{7} - \frac{1}{2}$	d. $6\frac{7}{8} + 3\frac{1}{5}$

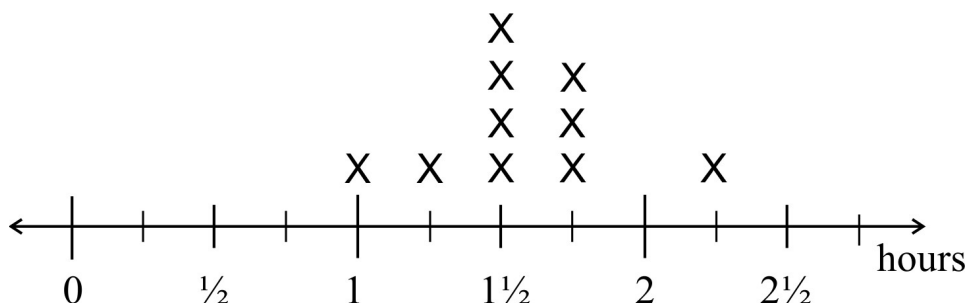
8. Write the fractions in order starting from the smallest.

$$\frac{4}{7}, \frac{5}{9}, \frac{7}{5}, \frac{1}{2}$$

9. Measure the sides of the triangle in inches.



10. Shaun has a job of delivering newspapers with advertisements every Wednesday. Over 10 weeks, he kept track of how long it took him to deliver them on his route.



- How many times (out of these 10 weeks) did it take him 1 hour 45 minutes to do so?
- How long did it take him when it took him the longest (it was bad weather)?
- What is the most common amount of time it took him?
- How much time in total did he spend delivering newspapers in these 10 weeks?

math

MAMMOTH



End-of-Year Test - Grade 5

This test is quite long, because it contains questions on all of the major topics covered in *Math Mammoth Grade 5 Complete Curriculum*. Its main purpose is to be a diagnostic test: to find out what the student knows and does not know. The questions are quite basic and don't involve especially difficult word problems.

Since the test is so long, I don't recommend that you have your child or student do it in one sitting. Break it into 3-5 parts and administer them on consecutive days, or perhaps in a morning/evening/morning/evening. Use your judgment.

A calculator is not allowed.

The test is evaluating the student's ability in the following content areas:

- the four operations with whole numbers
- the concept of an equation; solving simple equations
- divisibility and factoring
- place value and rounding with large numbers
- solving word problems, especially those that involve a fractional part of a quantity
- the concept of a decimal and decimal place value
- all four operations with decimals, to the hundredths
- coordinate grid, drawing a line graph, and finding the average
- fraction addition and subtraction
- equivalent fractions and simplifying fractions
- fraction multiplication
- division of fractions in special cases (a unit fraction divided by a whole number, and a whole number divided by a unit fraction)
- classifying triangles and quadrilaterals
- volume of rectangular prisms (boxes)

In order to continue with the *Math Mammoth Grade 6 Complete Worktext*, I recommend that the child gain a minimum score of 80% on this test, and that the teacher or parent review with him any content areas in which he may be weak. Children scoring between 70% and 80% may also continue with grade 6, depending on the types of errors (careless errors or not remembering something, versus a lack of understanding). Again, use your judgment.

Instructions to the student:

Do not use a calculator. Answer each question in the space provided.

Instructions to the teacher: The total is 182 points. A score of 146 points is 80%.

Question #	Max. points	Student score
The Four Operations		
1	2 points	
2	6 points	
3	2 points	
4	4 points	
5	2 points	
6	2 points	
7	3 points	
<i>subtotal</i>		/ 21
Large Numbers		
8	2 points	
9	1 point	
10	4 points	
11	1 point	
12	4 points	
<i>subtotal</i>		/ 12
Problem Solving		
13a	2 points	
13b	2 points	
14	3 points	
15	3 points	
16	3 points	
17	3 points	
<i>subtotal</i>		/ 16
Decimals		
18	4 points	
19	6 points	
20	3 points	
21	3 points	
22	3 points	
23	3 points	
24	9 points	
25	6 points	
26	9 points	
27	3 points	
28	3 points	
<i>subtotal</i>		/52

Question #	Max. points	Student score
Graphs		
29	3 points	
30	4 points	
<i>subtotal</i>		/7
Fractions		
31	3 points	
32	4 points	
33	4 points	
34	2 points	
35	4 points	
36	2 points	
37	5 points	
38	3 points	
39	2 points	
40	4 points	
41	2 points	
42	2 points	
43	4 points	
44	4 points	
<i>subtotal</i>		/45
Geometry		
45	4 points	
46	3 points	
47	6 points	
48	2 points	
49	2 points	
50	3 points	
51a	1 point	
51b	2 points	
52	2 points	
53	4 points	
<i>subtotal</i>		/29
TOTAL		/182

5. Place parentheses into the equations to make them true.

a. $42 \times 10 = 10 - 4 \times 70$

b. $143 = 13 \times 5 + 6$

6. Is 991 divisible by 4?

Why or why not?

7. Factor the following numbers to their prime factors.

<p>a. 26 /\</p>	<p>b. 40 /\</p>	<p>c. 59 /\</p>
---------------------	---------------------	---------------------

Large Numbers

8. Write the numbers.

a. 70 million 16 thousand 90

b. 32 billion 232 thousand

9. What is the value of the digit 8 in the number **56,782,010,000**?

10. Calculate the products.

<p>a. 224×10^7</p>	<p>b. $78,009 \times 10^5$</p>
<p>c. $30,000 \times 5,000$</p>	<p>d. $400 \times 20 \times 60$</p>

11. Estimate the result of $31,933 \times 305$.

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

<i>number</i>	593,204	19,054,947
to the nearest 1,000		
to the nearest 10,000		
to the nearest 100,000		
to the nearest million		

Problem Solving

13. Write a single expression (number sentence) for each problem, and solve.

a. A store was selling movies that originally cost \$19.95 with a \$5 discount. Mia bought five of them. What was the total cost?

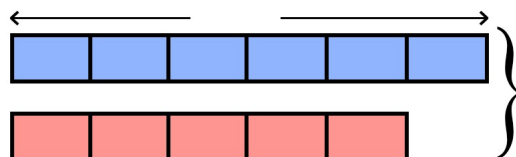
Expression: _____

b. A website charges a fixed amount for each song download. If you can download six songs for \$4.68, then how much would it cost to download ten songs?

14. Jack has an 8-ft long board. He cuts off $\frac{1}{6}$ of it.
How long is the remaining piece, in feet and inches?

15. A blue swimsuit costs \$42 and a red swimsuit costs $\frac{5}{6}$ as much. How much would the two swimsuits cost together?

Mark the \$42 in the bar model. Mark what is not known with “?”. Solve.



16. A bag has green and purple marbles. Two-fifths of the marbles are green, and the rest are purple.

a. Draw a bar model for this situation.

b. If there are 134 green marbles, how many are purple?

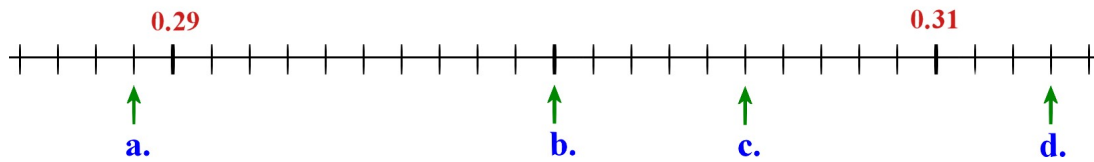
17. Karen and Ann share the cost of a DVD that costs \$29.90 so that Karen pays $\frac{3}{5}$ of it and Ann pays $\frac{2}{5}$ of it.

a. *Estimate* how much each person will pay.

b. Find the exact amount of how much each person will pay.

Decimals

18. Write the decimals indicated by the arrows.



a. _____ b. _____ c. _____ d. _____

19. Complete.

a. $0.9 + 0.05 =$ _____	b. $0.28 +$ _____ $= 1$	c. $0.82 - 0.2 =$ _____
d. $1.3 - 0.04 =$ _____	e. $0.25 + 0.8 =$ _____	f. _____ $- 0.2 = 0.17$

20. Write as decimals.

a. $\frac{8}{100} =$

b. $\frac{81}{1000} =$

c. $5\frac{21}{100} =$

21. Write as fractions or mixed numbers.

a. 0.048

b. 1.004

c. 7.22

22. Compare, and write $<$ or $>$.

a. 0.31 0.031

b. 0.43 0.093

c. 1.6 1.29

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

rounded to...	nearest one	nearest tenth	nearest hundredth
5.098			

rounded to...	nearest one	nearest tenth	nearest hundredth
0.306			

24. Solve.

a. $0.4 \times 7 =$	d. $10 \times 0.05 =$	g. $1.1 \times 0.3 =$
b. $0.4 \times 0.7 =$	e. $1000 \times 0.05 =$	h. $70 \times 0.9 =$
c. $0.4 \times 700 =$	f. $10^5 \times 0.5 =$	i. $20 \times 0.09 =$

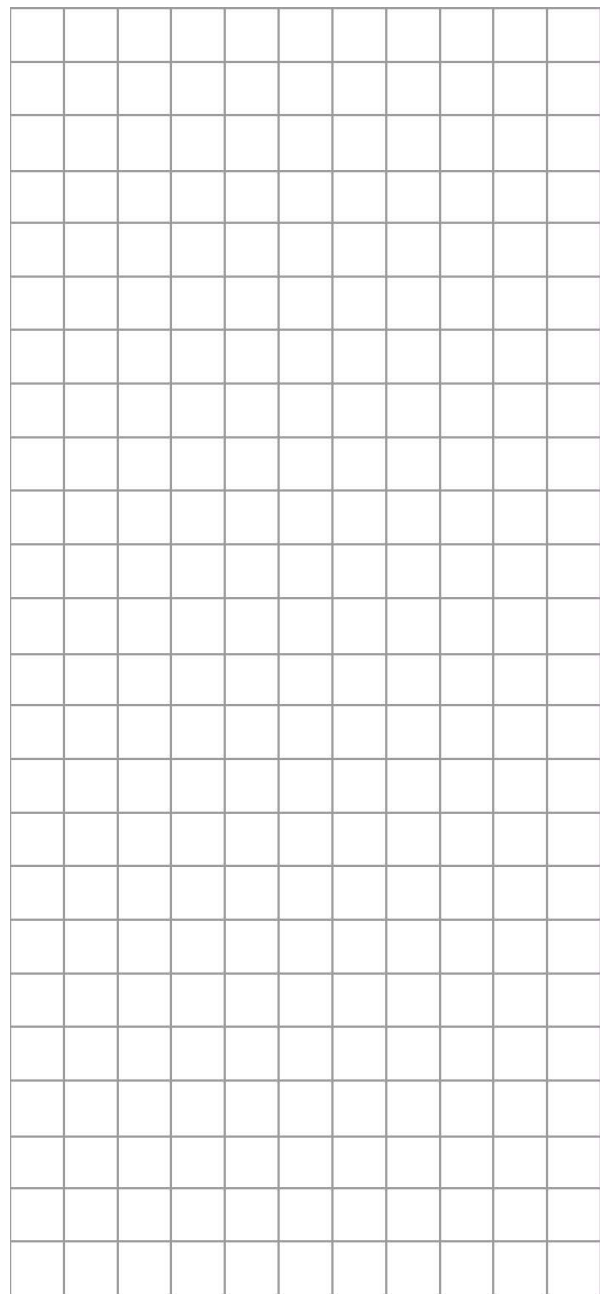
25. Divide.

a. $0.36 \div 6 =$	c. $3 \div 100 =$	e. $16 \div 10^2 =$
b. $5.6 \div 7 =$	d. $0.7 \div 10 =$	f. $712 \div 10^3 =$

26. Convert.

a. $0.2 \text{ m} = \underline{\hspace{2cm}} \text{ cm}$ $37 \text{ cm} = \underline{\hspace{2cm}} \text{ m}$ $2.9 \text{ km} = \underline{\hspace{2cm}} \text{ m}$	b. $0.4 \text{ L} = \underline{\hspace{2cm}} \text{ ml}$ $3.5 \text{ kg} = \underline{\hspace{2cm}} \text{ g}$ $240 \text{ g} = \underline{\hspace{2cm}} \text{ kg}$	c. $56 \text{ oz} = \underline{\hspace{1cm}} \text{ lb } \underline{\hspace{1cm}} \text{ oz}$ $74 \text{ in} = \underline{\hspace{1cm}} \text{ ft } \underline{\hspace{1cm}} \text{ in}$ $15 \text{ C} = \underline{\hspace{1cm}} \text{ qt } \underline{\hspace{1cm}} \text{ C}$
--	---	--

27. Two liters of ice cream are divided equally into nine bowls. Calculate, to the nearest milliliter, how much ice cream is in *two* bowls.



28. Calculate.

a. $4.2 - 2.78$

b. $71.40 \div 5$

c. 2.2×6.4

Graphs

29. Plot the points from the “number rule” on the coordinate grid.

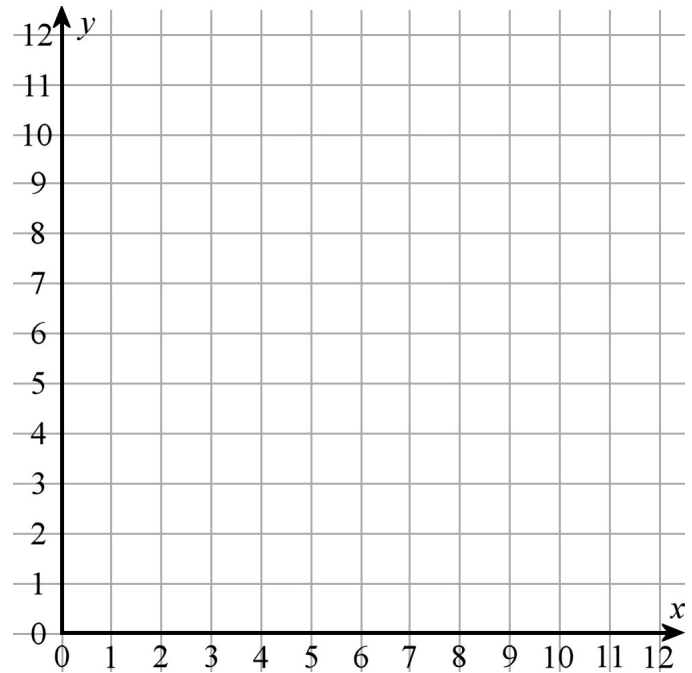
The rule for x -values:

Start at 0, and add 1 each time.

The rule for y -values:

Start at 1, and add 2 each time.

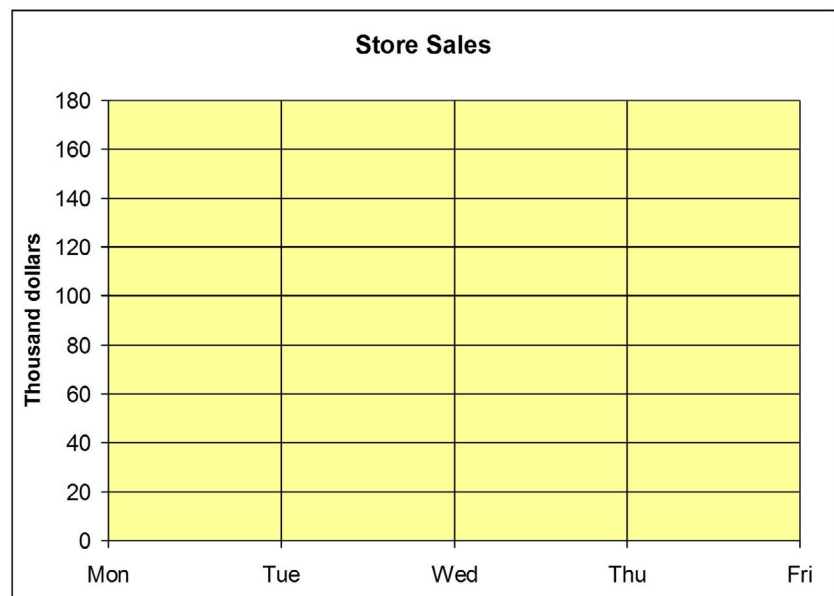
x	0	1				
y	1					



30. The table below gives the amount of sales in a grocery store from Monday through Friday.

Day	Sales (thousands of dollars)
Mon	125
Tue	114
Wed	118
Thu	130
Fri	158

- Make a line graph.
- Calculate the average daily sales for this period.

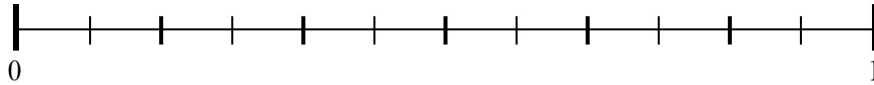


Fractions

31. Add and subtract.

<p>a.</p> $\begin{array}{r} 3\frac{7}{9} \\ + 2\frac{5}{9} \\ \hline \end{array}$	<p>b.</p> $\begin{array}{r} 5\frac{1}{6} \\ - 2\frac{5}{6} \\ \hline \end{array}$	<p>c.</p> $\begin{array}{r} 3\frac{7}{10} \\ 2\frac{8}{10} \\ + 7\frac{3}{10} \\ \hline \end{array}$
--	--	---

32. Mark the fractions on the number line. $\frac{3}{4}$, $\frac{1}{3}$, $\frac{4}{6}$, $\frac{5}{12}$



33. If you can find an equivalent fraction, write it. If you cannot, cross the whole problem out.

<p>a. $\frac{5}{6} = \frac{\quad}{20}$</p>	<p>b. $\frac{2}{7} = \frac{\quad}{28}$</p>	<p>c. $\frac{3}{8} = \frac{15}{\quad}$</p>	<p>d. $\frac{2}{9} = \frac{6}{\quad}$</p>
--	--	--	---

34. Find the errors in Mia's calculation and correct them.

$$\frac{2}{5} + \frac{2}{3}$$

↓ ↓

$$\frac{2}{15} + \frac{2}{15} = \frac{4}{15}$$

“I need these to have the same denominator.”

35. Add and subtract the fractions and mixed numbers.

<p>a. $\frac{1}{3} + \frac{5}{6}$</p>	<p>b. $\frac{4}{5} - \frac{1}{3}$</p>
<p>c. $6\frac{1}{8} - \frac{1}{2}$</p>	<p>d. $6\frac{7}{9} + 3\frac{1}{2}$</p>

36. You need $2\frac{3}{4}$ cups of flour for one batch of rolls.
Find how much flour you would need for three batches of rolls.



37. Compare the fractions, and write $<$, $>$, or $=$ in the box.

a. $\frac{6}{9} \square \frac{6}{13}$ b. $\frac{6}{13} \square \frac{1}{2}$ c. $\frac{5}{10} \square \frac{48}{100}$ d. $\frac{1}{4} \square \frac{25}{100}$ e. $\frac{5}{7} \square \frac{7}{10}$

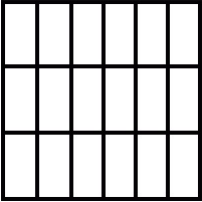
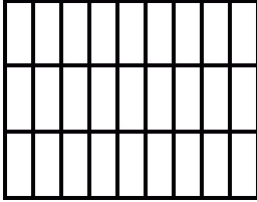
38. Simplify the following fractions if possible. Give your answer as a mixed number when you can.

<p>a. $\frac{21}{15} =$</p>	<p>b. $\frac{29}{36} =$</p>	<p>c. $\frac{42}{48} =$</p>
--	--	--

39. Is the following multiplication correct?
If not, correct it.

$\frac{2}{3} \times$  $=$ 

40. Multiply the fractions, and shade a picture to illustrate the multiplication.

 <p>a. $\frac{1}{3} \times \frac{5}{6}$</p>	 <p>b. $\frac{2}{9} \times \frac{2}{3}$</p>
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41. How many $\frac{1}{4}$ ft pieces can you cut from a string that is 15 feet long?

42. Three people share half a pizza evenly. What fractional part of the original pizza does each one get?

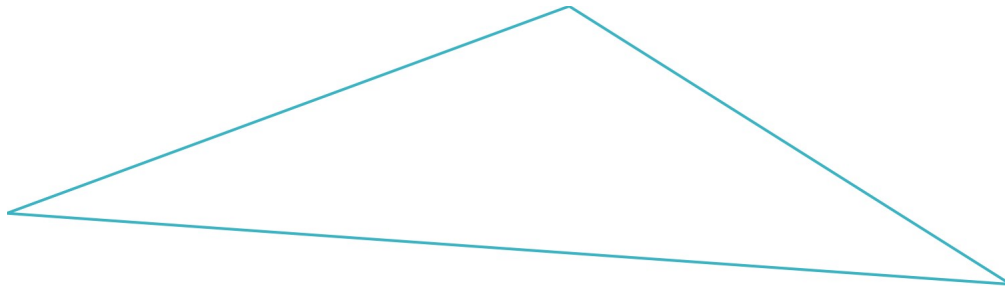
43. Is the result of multiplication more, less, or equal to the original number? You do not have to calculate anything. Compare, writing $<$, $>$, or $=$ in the box.

a. $\frac{19}{17} \times 93$ <input style="width: 30px; height: 20px;" type="text"/> 93	b. $\frac{8}{9} \times \frac{5}{6}$ <input style="width: 30px; height: 20px;" type="text"/> $\frac{5}{6}$	c. $\frac{14}{15} \times 516$ <input style="width: 30px; height: 20px;" type="text"/> 516	d. $\frac{52}{52} \times 7.09$ <input style="width: 30px; height: 20px;" type="text"/> 7.09
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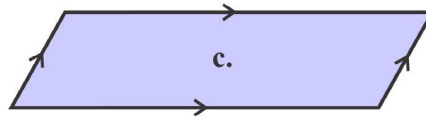
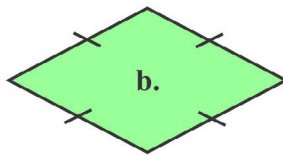
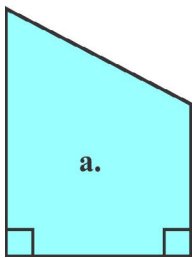
44. Solve. Give your answer as a mixed number and simplified to lowest terms.

a. $\frac{7}{6} \times 9$	b. $\frac{1}{7} \div 3$
c. $\frac{4}{5} \times 3\frac{2}{3}$	d. $2 \div \frac{1}{9}$

45. Measure the sides of the triangle in inches. Find its perimeter.



46. Name the quadrilaterals. Use the most descriptive names.

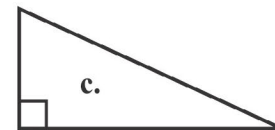
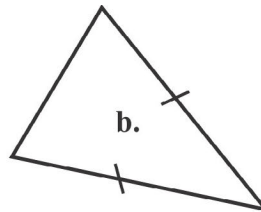
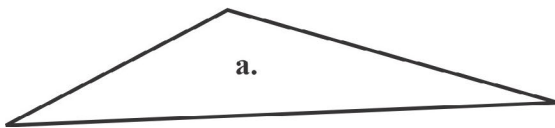


a. _____

b. _____

c. _____

47. Classify each triangle according to its sides and its angles.



a. _____ and _____

b. _____ and _____

c. _____ and _____

48. Give the definition of a trapezoid.

49. Write an “x” if the shape also fulfills the definition of a rectangle or of a parallelogram.

	a rectangle	a parallelogram
a. Every rhombus is also...		
b. Every square is also...		

50. Can an obtuse triangle be isosceles?

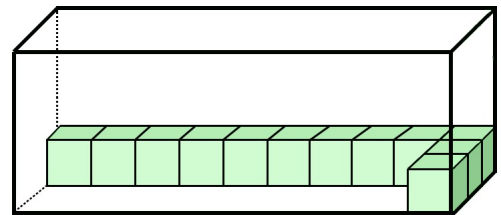
If not, explain why not.

If yes, sketch an example.

51. A rectangular prism is being filled with little cubes (cubic units). The cubes can fit in the prism four levels high.

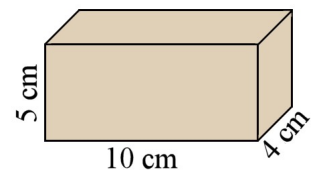
a. What is the volume of the prism, in cubic units?

b. If the edge of each little cube measures 2 inches, what is the volume of the prism, in cubic inches?



52. This box is a rectangular prism.

What is the volume of *four* such boxes?



53. Matthew has a rainwater collection tank in his yard that is rectangular, like a box. It is 1.2 m long, 60 cm wide, and 1 m tall.

a. Find the volume of the tank in cubic meters.

b. After a rainy night, the tank was about $\frac{1}{3}$ full.
About how many liters of water were in the tank?
1 cubic meter equals 1,000 liters.

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