

math

MAMMOTH

Skills Review Workbook

- Review of the four operations
- Expressions and equations
- Decimals
- Ratios
- Percent
- Factoring
- Fractions
- Integers
- Geometry
- Statistics



Sample worksheet from

www.mathmammoth.com

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Grade 6

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Sample worksheet from
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Foreword

Math Mammoth Grade 6 Skills Review Workbook has been created to complement the lessons in *Math Mammoth Grade 6* complete curriculum. It gives the students practice in reviewing what they have already studied, so the concepts and skills will become more established in their memory.

These review worksheets are designed to provide a spiral review of the concepts in the curriculum. This means that after a concept or skill has been studied in the main curriculum, it is then reviewed repeatedly over time in several different worksheets of this book.

This book is divided into chapters, according to the corresponding chapters in the *Math Mammoth Grade 6* curriculum. You can choose exactly when to use the worksheets within the chapter, and how many of them to use. Not all students need all of these worksheets to help them keep their math skills fresh, so please vary the amount of worksheets you assign your student(s) according to their needs.

Most of the worksheets are designed to be one page, and includes a variety of exercises in a fun way without becoming too long and tedious.

The answer key is available as a separate book.

I wish you success in teaching math!

Maria Miller, the author

Skills Review 1

1. Rewrite the expressions using an exponent, then solve them. You may use a calculator.



a. $7 \times 7 \times 7 \times 7 \times 7 \times 7$

b. $9 \times 9 \times 9 \times 9$

c. 80 squared

d. 60 cubed

2. Divide. There may be a remainder. You can build a multiplication table for the divisor to help you. Lastly, check your result.

$2 \times 39 = 78$	$39 \overline{) 94206}$	$\begin{array}{r} \times 39 \\ \hline \end{array}$
--------------------	-------------------------	--

3. Greenville High School has 5,928 students. One-eighth of the students walk or ride bikes to school, two-thirds ride the bus, and the rest ride to school in cars. What fraction of the students ride to school in cars?

4. Solve. Remember the order of operations!

<p>a. $5,240 - (80 + 60) \times 30 =$</p>
<p>b. $325 \times 3 + \frac{7,200}{90} =$</p>

5. Factor this number to its prime factors.

$\begin{array}{c} 86 \\ / \backslash \end{array}$

6. Complete. Note that the operation used is not always the same.

$- \boxed{900}$	$\div \boxed{}$	$\times \boxed{}$	$+ \boxed{}$	$- \boxed{}$	$\div \boxed{}$	
$7,200$	$6,300$	70	$5,600$	$6,400$	$3,500$	50

Skills Review 3

1. Round to the nearest...

Number	514,372	827,491	36,594,136	7,091,512	4,978,627
...thousand					
...ten thousand					
...hundred thousand					
...million					

2. Compare and write $<$, $>$, or $=$.

a. ten million 10^7

b. 39,000 10^5

c. 10^8 a billion

d. $10^7 - 1000$ 10^6

e. $10^5 + 10^3$ 10^8

f. 3×10^4 4×10^3

3. Fill in the pattern using a calculator.

$8^1 =$

$8^2 =$

$8^3 =$

$8^4 =$

$8^5 =$

$8^6 =$

4. Divide. Below each division, check your result.

a. $57 \div 9 =$ _____ R _____

_____ \times _____ + _____ = _____

b. $71 \div 6 =$ _____ R _____

_____ \times _____ + _____ = _____

5. Express the area (A) as a multiplication, and solve.

a. A square with a side of 8 kilometers:

A = _____

b. A square with sides 11 m long:

A = _____

Puzzle Corner

Find the fractions that can go into the puzzles.

Hint: If the answer has a denominator of 24, think what the denominators of the two fractions could have been.

	+		=	$\frac{16}{24}$
	+		=	$\frac{28}{45}$

	+		=	$\frac{19}{30}$
	+		=	$\frac{51}{56}$

=	=
$\frac{17}{36}$	$\frac{49}{60}$

=	=
$\frac{41}{70}$	$\frac{23}{24}$

Skills Review 4

1. Estimate the result using mental math and rounded numbers. Find the exact value using a calculator. Also, find the error of estimation. In **b.**, round the exact value to two decimal digits.



a. $3,580 \times 21,040$

Estimation:

Exact:

Error of estimation:

b. $48,732 \div 4,216$

Estimation:

Exact:

Error of estimation:

2. A certain type of fabric costs \$7.45 a yard, and another costs $\frac{3}{5}$ as much. Brenna has \$90. Find out how much Brenna pays if she buys four yards of the more expensive fabric and seven yards of the cheaper fabric.

Find how much the cheaper fabric costs.



Find the total cost of buying the two fabrics.



Find how much money Brenna has left.

How much money does Brenna have left after buying the fabric?

3. Divide. Remember that division can be written using a fraction line as well.

a. $\frac{280}{7} =$

b. $\frac{96}{12} =$

c. $\frac{3500}{10} =$

d. $\frac{760}{20} =$

e. $\frac{800}{50} =$

4. Find the value of these expressions, using paper and pencil methods. Use your notebook for more space.

a. $360 - 7.8 \times 34.2$

b. $896 \div (18.6 + 13.4) - 19.3$

5. Find the missing factors.

a. $0.8 \times \underline{\hspace{2cm}} = 0.72$

b. $11 \times \underline{\hspace{2cm}} = 9.9$

c. $0.6 \times \underline{\hspace{2cm}} = 4.2$

Skills Review 5

1. Write the measurements in the metric unit charts.

a. 5.46 km

km	hm	dam	m	dm	cm	mm

b. 39.8 dm

km	hm	dam	m	dm	cm	mm

c. Use the chart to do these conversions:

$$5.46 \text{ km} = \underline{\hspace{2cm}} \text{ hm} = \underline{\hspace{2cm}} \text{ dam} = \underline{\hspace{2cm}} \text{ m}$$

$$39.8 \text{ dm} = \underline{\hspace{2cm}} \text{ m} = \underline{\hspace{2cm}} \text{ dam} = \underline{\hspace{2cm}} \text{ hm}$$

2. Rewrite each expression using the fraction line, then solve. *Hint: Only whatever comes right after the \div sign needs to be in the denominator.*

a. $56 \div 7 \cdot 6$

b. $81 \div (9 \cdot 3) \cdot 12$

c. $6 \cdot 8 \div 4 \cdot 5$

3. A building has three rooms. The dimensions of the rooms are 22 ft by 12 ft, 10 ft by 12 ft, and 12 ft by 12 ft. What is the total area of the building?

4. Express the volume (V) as a multiplication, and solve.

a. A cube with edges 7 cm in length:

$$V = \underline{\hspace{4cm}}$$

b. A cube with edges that are all 4 m long:

$$V = \underline{\hspace{4cm}}$$

5. First convert the fractional parts into like fractions. Then add or subtract.

a. $7\frac{4}{9} - 2\frac{6}{15}$

b. $9\frac{7}{12} + 14\frac{3}{8}$

Skills Review 6

1. Find a number that fits in place of the unknown.

a. $x \div 80 = 70$

b. $30 \times M = 2,700$

2. Fill in the missing numbers in these equivalent fractions and mixed numbers.

a. $3 \frac{6}{9} = 3 \frac{2}{\square}$

b. $\frac{6}{10} = \frac{\square}{60}$

c. $\frac{4}{5} = \frac{12}{\square}$

d. $4 \frac{1}{4} = \square \frac{7}{\square}$

3. Continue the patterns for six more numbers.

a. 2,780,000; 2,820,000; 2,860,000;

b. 923,752; 923,452; 923,152;

4. Multiply.

		\$	6	5	.	3	8
		x				4	7

5. From the top, find your way through the maze by coloring factors of 84. You can move right, left, down, or diagonally down.

9	14	13	16
42	44	32	27
12	18	41	22
5	21	11	17
15	7	8	26
36	28	40	33
24	10	3	29

6. During a five-day workweek, Mia receives *about* 90 e-mails per day, Damian receives $\frac{2}{3}$ as many as Mia, and Stella receives $\frac{3}{4}$ as many as Damian.

- a. *About* how many e-mails do they receive in three weeks?
- b. If they work 49 weeks in a year, *about* how many e-mails do they receive during that time?

7. Divide in parts, then add or subtract the results.

a. $\frac{480 + 64}{8}$

b. $\frac{540 + 60 - 18}{6}$

c. $\frac{160 - 70}{5}$

Skills Review 7

1. Evaluate the expressions when the value of the variable is given.

a. $3x + 26$ when $x = 9$

b. $\frac{32}{z} \cdot 15$ when $z = 8$

2. Solve. Use a notebook if necessary. Also, a flowchart showing the steps of the solution may help.

Mariah bought three lamps for \$42 each that had been discounted by $\frac{1}{3}$ of their price. Shelly bought three lamps for \$45 each that had been discounted by $\frac{2}{5}$ of their price.

a. Find the original prices of the two different kinds of lamps.

b. Who saved more money overall?

How much more?

3. It costs \$57 an hour to rent a personal watercraft. Kyle rents one for three hours twice a month. *Estimate* how much he will spend on rental fees in a year.

4. Divide. Check your answer by multiplying.

a. $44 \overline{) 9548}$

×

b. $60 \overline{) 26.28}$

×

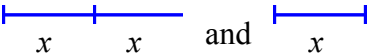

Skills Review 8

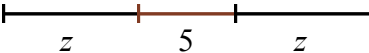
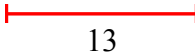
- The area of a square is 81 cm^2 . What is its perimeter?
 - The volume of a cube is 125 cubic inches. How long is its (one) edge?
- Multiply. You can use estimation to check if your answers are reasonable.

a. $3\frac{1}{4} \times 1\frac{4}{5}$

b. $1\frac{3}{5} \times 3\frac{1}{3}$

- Write an expression for the illustration, and simplify it.

a.  and 

b.  and 

- Match each problem with the term that correctly identifies the number(s) that are underlined.

$250 \div 50 = \underline{5}$

sum

$\underline{32} - 17 = 15$

divisor

$\underline{70} \times \underline{8} = 560$

minuend

$23 + 67 = \underline{90}$

product

$56 - \underline{39} = 17$

addends

$30 \times 80 = \underline{2400}$

subtrahend

$\underline{70} \div 5 = 14$

quotient

$\underline{28} + \underline{35} = 63$

difference

$81 - 23 = \underline{58}$

dividend

$108 \div \underline{12} = 9$

factors

- Solve using mental math.

a. $40 \times 70 - 20 \times 60$

=

b. $800 \div 5 - 300 \div 10$

=

c. $58 + 73 + 96$

=

d. $300 \div 6 \times 400 \div 8$

=