# Book One

Grades 4-5

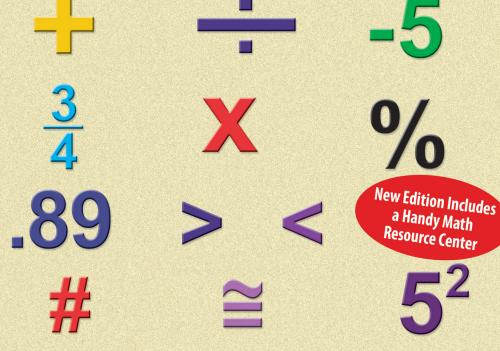
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Teacher, Richard
W. Fisher

# New 3rd Edition! Mastering Essential MATH SKIILS

# 20 minutes a day to success

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Richard W. Fisher

Edited by Christopher Manhoff



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# **Mastering Essential Math Skills**

# 20 minutes a day to success

Book One: Grades 4 and 5
3rd EDITION

### Richard W. Fisher

Edited by Christopher Manhoff

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#### **Math Essentials**

#### Mastering Essential Math Essentials Book 1, 3rd Edition

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#### **Notes to the Teacher or Parent**

What sets *Mastering Essential Math Skills* apart from other books is its approach. It is not just a math book, but a *system* of teaching math. Each daily lesson contains five key parts: two speed drills, review exercises, teacher tips (Helpful Hints), a section containing new material, and a daily word problem. Teachers have flexibility in introducing new topics, but the book provides them with the necessary structure and guidance. The teacher can rest assured that essential math skills are being systematically learned.

With so many concepts and topics in the math curriculum, some of these essential skills are easily overlooked. This easy-to-follow math program requires only twenty minutes of instruction per day. Each lesson is concise, and self-contained. The daily exercise help students to not only master math skills, but also to maintain and reinforce those skills through consistent review—something that is missing in most math programs. Skills learned in this book apply to all areas of the math curriculum, and consistent review is built into each daily lesson. Teachers and parents will also be pleased to note that the lessons are quite easy to correct.

The book is divided into eight chapters, which cover whole numbers, fractions, decimals, percentages, integers, geometry, charts and graphs, and problem solving.

Mastering Essential Math Skills is based on a system of teaching that was developed by a math instructor over a twenty-year period. This system has produced dramatic results for students. The program quickly motivates students and creates confidence and excitement that leads naturally to success.

Please read the following "How to Use This Book" section and let this program help you to produce dramatic results with your children or math students.

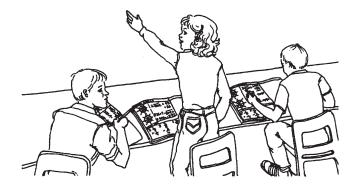
#### How to Use this Book

Mastering Essential Math Skills is best used on a daily basis. The first lesson should be carefully gone over with the students to introduce them to the program and familiarize them with the format. A typical lesson has been broken down on the following pages into steps to suggest how it can best be taught. It is hoped that the program will help your students to develop an enthusiasm and passion for math that will stay with them throughout their education.

As you go through these lessons every day you will soon begin to see growth in the students' confidence, enthusiasm, and skill level. The students will maintain their mastery through the daily review.

In school, the book is best used during the first part of the math period. The structure and format seem to naturally condition the students to "think nothing but math" from the moment class begins. The students are ready to "jump into the lessons" without any prompting or motivating needed from the teacher. This makes for a very smooth and orderly start each day.

Also, once you have finished the daily lesson, there will still plenty of time to explain related topics, or work on new topics in the basic test or through other sources.

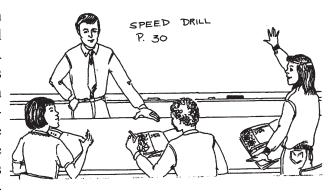


Step 1

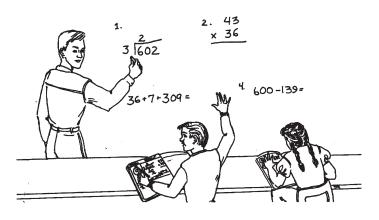
Students open their books to the appropriate lesson and begin together. Have students first go to the review exercises, working each problem and showing all their work. If students finish early, they are to check their work in the review section.

Step 2

When you feel that enough time has been spent on the review exercises (usually two to three minutes), call out "Time." The next step is to go to the speed drills. A good signal is to say, "Get ready to add." The students go to the addition drill and wait for the next signal. Then say, "The number to add is '()'." At this stage the students place the given number inside the addition circle and, as quickly as possible, write all the sums in the appropriate space outside the perimeter of the circle. As students complete the drill, have them drop their pen-



cils and stand or signal in some appropriate way. When enough time has been given, say, "Time." Students then correct the drill as the answers are read aloud by the teacher or a student. The same process is used for the multiplication drill. It is amazing how motivating these speed drills can become in helping students to master their addition and multiplication facts.

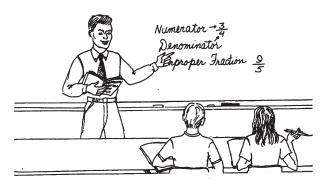


#### Step 3

After the speed drills, work through the review problems with the class. Work the problems on the board or overhead and go through them step-by-step with the students, drawing responses and asking questions as you go. Allow the students to check their own work in this section. This section provides consistent review and reinforcement of topics that the class learns.

#### Step 4

After going through the review exercises, give a short introduction of the new material. This is where the teacher's unique style and skills come into play. Appropriate concepts, vocabulary, and skills can be introduced on the blackboard or overhead. This should require only a few minutes.



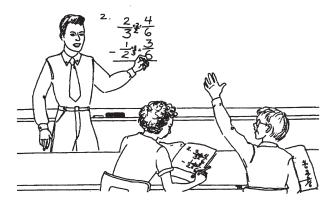


#### Step 5

After a brief introduction of the new material, go over the "Helpful Hints" section with the class. Be sure to point out that it is often helpful to come back to this section as the students work independently. This section often has examples that are very helpful to the student.

#### Step 6

After going through the "Helpful Hints" section, do the two sample problems. It is highly important to work through these two problems with the class. The students can model the techniques that are discussed and demonstrated by the teacher. Go through the steps on the board or overhead, and the students can write them directly into their books. Working these sample problems together with the class can prevent a lot of



unnecessary frustration on the part of the students. In essence, in working them together, each student has successfully completed the first two problems of the lesson. This can assist in developing confidence as a routine part of each daily lesson.

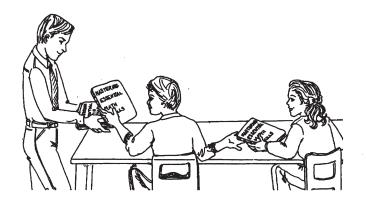


#### Step 7

Next, allow the students to complete the daily exercises and the word problem of the day. Make it a point to circulate and offer individual help. If it is necessary, work another example or two on the board with the entire class. Also, reading the word problem of the day together with the class before they work it independently may be very beneficial.

#### Step 8

Last, collect the books, correct them and return them the next day. It may sometimes be appropriate to correct them with the students.



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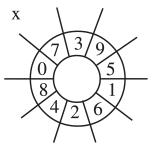
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Review Exercises	Speed Drills
1. 342 + 27 2. 713 + 24	7 3/9 + 0 5 1 1
3. $6 + 7 + 4 =$ 4. $6$ 7 + 2	7 3/9 X 0 5 1 4/2 6
<ol> <li>Line up the numbers on the right side.</li> <li>Add the ones first.</li> <li>Remember to regroup when necessary.</li> <li>"Sum" means to add.</li> </ol>	Helpful Hints
S. 453 S. 423 1. 43 2. 67 + 364 345 + 54 + 34 + 223	3
3.       42       4.       324       5.       426       6.       453         36       83       314       232         + 25       + 14       + 222       + 632	<ul><li>4</li><li>5</li><li>6</li></ul>
7. 33 + 24 + 16 =	7
8. 34 + 216 + 425 =	8
9. Find the sum of $223 + 15 + 234$	9
10. Find the sum of 16, 17, 12, and 18	Score Score

There are 34 boys and girls in Mr. Smith's class, and 38 in Ms. Garcia's class. How many students are there in both classes?

Speed Drills	
+ 7 3/9 5 8 4/2 6	1. 34 12 + 26
/ \	3. 42

2. 315 24 + 234



2 + 116 + 25 =4. Find the sum of 14, 18, and 24

When writing large numbers, place commas every three numerals, starting from the right side. This makes them easier to read.

**Review Exercises** 

Helpful Hints

Example:

5 million, 234 thousand, 216 5,234,216

1	
2	
3	

7 8

7. Find the sum of 1,213 and 7,176

9

- 8. 3,512 + 4,213 + 7,232 =
- 45,462 + 7,374 =9.
- Find the sum of 3,712, 4,367, and 843 10.

Score

10

	Review Exercises	Speed Drills
1. 23	2. 3,712	
42	2,314	7/3/9
+ 43	+ 3,214	$0$ $\sqrt{5}$
	<del></del>	8 1
		X4/2\6\
2 Eind de	1 224 272 1 2 214	
3. Find the su	am of 1,234, 372, and 2,314	
		$\setminus $
4. 16 + 172	+ 3,752 + 2,713 =	7/3/9
		$0$ $\sqrt{5}$
1. Line up the number	rs on the right side.	8 1
2. Subtract the ones fi		$\sqrt{4/2}$ 6
3. Remember to regro		
4. It may be necessary once.	7 to regroup more than $\begin{array}{c} 8 & 1 \\ 7 & 9 & 3 \end{array}$	3
5. "Find the difference		Helpful
	more" means to subtract. $\overline{718}$ $\overline{369}$	Hints

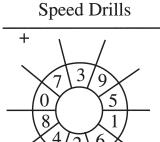


- 7. Find the difference between 134 and 28.
- Subtract 336 from 847. 8.
- 7,833 625 =9.
- 986 is how much more than 723? 10.

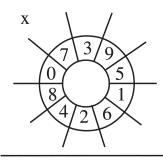
J			
6			
7			
8			
9			
10			
Sco	re		

Problem Solving

76 kids walk to school and 19 take the bus. How many more walk to school than take the bus?



1. 48 + 73



 $3. \quad 372 + 26 + 414 =$ 

1. Line up the numbers on the right.

Examples:

Helpful Hints 3. It may be necessary to regroup more than once.

2. Subtract the ones first.

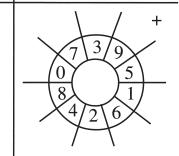
1
2
3

- 6
- 7. Subtract 376 from 700.
- 8
- 8. Find the difference between 502 and 96.
- 9

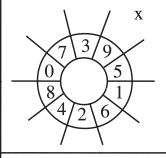
- 9. 7,000 269 =
- 10. What number is 276 less than 706?

# 1. 60

**Review Exercises** 



Speed Drills



Use what you have learned to solve the following problems.

5

7. 600 - 208 =

Q

7

Score

8. Find the sum of 12, 16 and 47.

8

9. Find the difference between 764 and 149.

10

$$10. 23 + 726 + 233 =$$

Problem

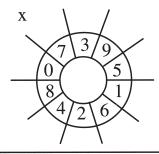
Solving

A theater has 350 seats. If 243 have been taken by moviegoers, how many seats are left empty?

Speed Drills
+ 7 3/9 0 5 1 4/2 6

$$2. 17 + 23 + 24 =$$

3. Find the difference between 300 and 182.



$$4. \quad 5,000 - 347 =$$

1. Line the numbers up on the right.

Examples:

- Helpful Hints
- 2. Multiply the ones first.3. Regroup when necessary.
- 2 4
- $^{1}2^{2}36$

- 4. "Product" means to multiply.
- $\frac{x}{7}\frac{3}{2}$
- $\frac{x}{944}$

1
2
3

- S. 35 x 3
- S. 432 x 6
- 1. 43 x 3
- 2. 25 x 6

- 3. 232 x 4
- 4. 236 x 4
- 5. 306 x 3
- 6. 3,262 x 7

7. 
$$726 \times 4 =$$

8

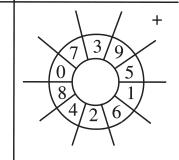
Score

8. 
$$8 \times 327 =$$

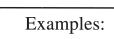
9

- 9. Find the product of 184 and 6.
- 10. Multiply 7 and 2,133.

1.		23
1.	X	4



**Speed Drills** 



1. Line the numbers up on the right.

2. Multiply the ones first.

3. Multiply the tens second.4. Add the two products.

$$\frac{x}{2148}$$

$$\frac{1\ 2\ 9\ 0}{1,3\ 7\ 6}$$

$$\frac{1\ 0\ 7\ 4\ 0}{1\ 2,8\ 8\ 8}$$

1

2

8. 
$$36 \times 52 =$$

10. 
$$320 \times 43 =$$

3	
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7	
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9	
10	
Sco	ore
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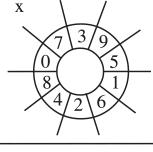
Problem Solving

A small school has only 8 classrooms. There are 32 desks in each classroom. How many kids can go to the school and have a desk?

Speed Drills					
7 3/9 0 5 1					

2. Find the product of 24 and 36.

4. Find the difference between 712 and 96.



Helpful Hints

Use what you have learned to solve the following problems.

1
2
3

S. 423 x 6 S. 432 x 23 1. 26 x 3

2. 304 x 6

3. 527 x 6

7.

4. 47 x 30

Find the product of 4 and 216.

5. 47 x 34 6. 246 x 23

U
7
8

8.  $30 \times 712 =$ 

9.  $33 \times 219 =$ 

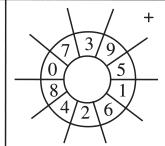
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10. 76 x 89 =

9

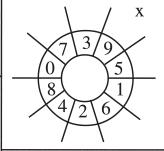
10

1.		346
	_	128



**Speed Drills** 

$$3. \quad 7,653 \\ + 2,374$$



- 2. Multiply
- 3. Subtract
- 4. Begin again

	1	7 r 1
2	3	5
-	$\frac{2}{1}$	<b>∀</b> 5
	- 1	4
		1

Examples
$$\begin{array}{r}
6^{r3} \\
4)27 \\
-24
\end{array}$$

Remember! The remainder must always be smaller than the divisor!



S. 
$$2)37$$

S. 
$$2)\overline{37}$$
 S.  $4)\overline{37}$  1.  $3)\overline{43}$  2.  $8)\overline{43}$ 

1	
2	
3	

3. 
$$7)87$$

3. 
$$7\overline{\smash)87}$$
 4.  $4\overline{\smash)93}$  5.  $8\overline{\smash)97}$  6.  $6\overline{\smash)43}$ 

7. 
$$66 \div 5 =$$

8. 
$$97 \div 4 =$$

9. 
$$\frac{61}{5}$$

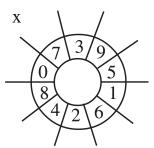
10. 
$$\frac{37}{2}$$

Problem Solving

A teacher needs 72 rulers for his class. If rulers come in boxes that contain 6 rulers, how many boxes does the teacher need?

Speed Drills					
7 3/9 0 5 1					

- 1. 2)35
- 2. 6)55
- 3.  $4 \times 236 =$
- 4. 700 217 =



Helpful Hints

- 1. Divide
- 2. Multiply
- 3. Subtract
- 4. Begin Again

Remember! The
remainder must
always be smaller
than the divisor!

- $\frac{171}{1}^{2}$
- $\begin{array}{c}
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- Examples:

$$\begin{array}{c|c}
-8 & \downarrow \\
\hline
0 & 1 & \downarrow \\
-0 & \\
\hline
1 & 2 \\
-1 & 2 \\
\hline
0
\end{array}$$

 $\begin{array}{r}
 67 \\
 5)336 \\
 -30 \\
 \hline
 36 \\
 -35 \\
 \hline
 1
\end{array}$ 

1
2

3

- S. 3) 432
- S. 3) 913
- 1. 2) 512

- 2. 2) 819
- 3. 7) 924
- 4. 5) 412

- 6 7 8
- 5.
- 6) 208
- 6. 3) 614
- 7. 4) 484

- 9 10 Score
- 8. 4) 302
- 9. 8) 979
- 10. 6) 953

,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1 (0,1110 010			$\mathcal{C}$		,	C
		Review Ex	xercises			S	peed Drills
1.	, , ,		9 330 een 236 and 8	X	26 42		7 3/9 + 0 5 1 4 2 6
3. Su 4. Be Remerema	ultiply btract gin Again ember! The inder must	$ \begin{array}{r}     2404 \\     \hline     3)7213 \\     \underline{-6} \\     \hline     12 \\     \underline{-12} \\     \hline     01 \\     \underline{-0} \end{array} $	Examples	$ \begin{array}{r}                                     $	√4 . ↓ . 4 2		$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$
	ys be ler than the or!	1 3 - 1 2 1			2		Helpful Hints
S.	3) 7062	S.	4) 3452	1.	4) 34	-52	2
	\	2	1) 2126				3
2.	4) 6743	3.	4) 3426	4.	4) 72	32	5
5.	5) 6555	6.	4) 5995	7.	4) 13	32	6       7
							8
8.	4) 5533	9.	4) 1224	10.	4)3210	)	9
							10

Problem Solving

Mrs. Toran, has baked 2,112 cookies. If she puts 6 cookies in a box, how many boxes does she need to buy?

Reviewing	DIVI	SIOII U	y 1-Digit Diviso	113		44.11	ole Ivullibeis
Speed	Drill	s		I	Review Exercises		
+ 7 3	9 5 1		1. 5	) 1232	2. 213 x 7	_	
$\begin{array}{c c}  & 4 & 6 \\  & x & 7 & 3 & 9 \\ \hline  & 0 & 5 & 5 \end{array}$			3. 71 16		4. 344	l + 16 +	245 =
4/2/6			Use what you have learned to solve the following problems.  2. Multiply 3. Subtract Remainders must always be less that the divisor.				
Helpful Hints			4. Begin again		s may sometimes	appear in	the
	1						
	2	S.	3 ) 245	S.	8 ) 8568	1.	2)32
	3						
	4	2.	5 ) 750	3.	3 ) 765	4.	5 ) 173
	5						
	6	5.	6 ) 2467	6.	8 ) 698	7.	6 ) 1817

- 3 ) 7213 9. 6 ) 6007 10. 8 ) 3209

1.	2) 314

Speed Drills

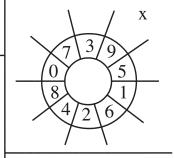
Examples:

- 1. Divide
- 2. Multiply
- 3. Subtract
- 4. Begin again

$$\begin{array}{c|c}
 & 1^{r \cdot 16} \\
60) & 7 \cdot 6 \\
-60 & 0
\end{array}$$

$$\begin{array}{r}
 4^{11} \\
 40) 176 \\
 -160 \\
 \hline
 16
\end{array}$$

$$\begin{array}{r}
30) \overline{372} \\
-30 \\
\hline
72 \\
-60 \\
\hline
12
\end{array}$$



Helpful Hints

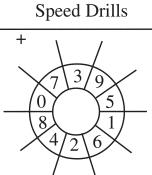
**Review Exercises** 

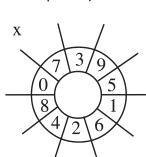
3

4

Problem Solving

A bakery puts chocolate-chip cookies into boxes of 20 each. If 240 cookies were baked, how many boxes would be needed?





Helpful Hints

- 1. 70 16
- 3 ) 345 3.

- 2. 23 24 234
- 4. 224 x 3

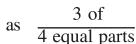
#### Example:

A fraction is a number that names a part of a whole or a group.



numerator denominator

Think of  $\frac{3}{4}$  as



1 2

3

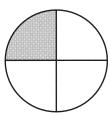
4

5

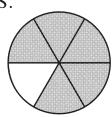
6

Write a fraction for each shaded figure (some may have more than one name).

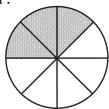
S.



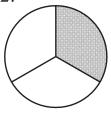
S.

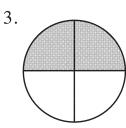


1.

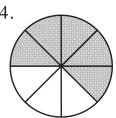


2.

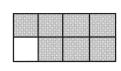




4.



5.



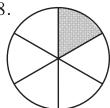
6.



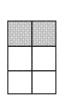
Score

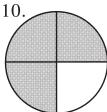
7.

8.



9.





Extra credit: On a separate sheet of paper draw a figure for the following fractions.

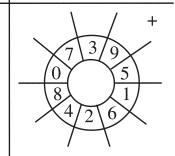
5 boxes weigh a total of 30 pounds. If each box weighs the same, how much does each box weigh?

Problem Solving

#### Speed Drills

1. 
$$4 \times 213 =$$

$$2. 16 + 223 + 13 =$$

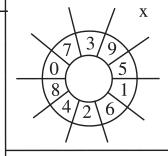


 $\frac{2}{4}$  has been reduced to its simplest form, which is  $\frac{1}{2}$ 

Examples 
$$2 \overline{\smash{\big)} \frac{6}{8}} = \frac{3}{4}$$

Divide the numerator and the denominator by the largest possible number.

$$5 \overline{)\frac{5}{10}} = \frac{1}{2}$$



$$= \frac{2}{4} = \frac{1}{2}$$

$$2\overline{)\frac{4}{6}} = \frac{2}{3}$$

Reduce each fraction to its lowest terms.

S. 
$$\frac{3}{6} =$$

S. 
$$\frac{2}{8} =$$

1. 
$$\frac{2}{10}$$
 =

$$\frac{2}{6} =$$

$$\frac{6}{9} =$$

$$\frac{10}{15} =$$

$$\frac{5}{10} = \frac{8}{10}$$

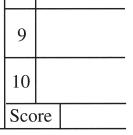
6. 
$$\frac{3}{9} =$$

7. 
$$\frac{5}{15}$$
 =

8. 
$$\frac{2}{12}$$
 =

9. 
$$\frac{6}{10}$$
 =

10. 
$$\frac{7}{14}$$
 =



Problem Solving

If there are 12 crayons in each box, how many crayons are there in  $1\frac{1}{2}$  boxes?

# \*\* Speed Drills \*\* \*\*Total Control of the Control

**Review Exercises** 

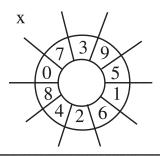
1. What fraction of the figure is shaded?



2. Reduce  $\frac{4}{6}$  to its lowest terms.

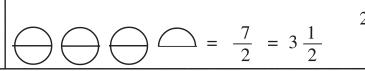
3. 21 <u>) 443</u>

4. 423 x 20



An improper fraction has a numerator that is equal to or greater than its denominator. Improper fractions can be written either as whole numbers or as mixed numerals (a whole number and a fraction). To change, divide the numerator by the denominator. Example:  $\frac{1}{2}$ 

Helpful Hints



1 Change each improper fraction to a mixed number or a whole number.

4

S. 
$$\frac{3}{2} =$$

S. 
$$\frac{9}{6} =$$

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

$$\frac{5}{2} =$$

$$\frac{3}{5} = \frac{8}{5}$$

$$\frac{10}{7} =$$

$$\frac{6}{4} =$$

6. 
$$\frac{4}{3}$$
 =

$$\frac{12}{5} =$$

8. 
$$\frac{7}{3} =$$

9. 
$$\frac{11}{5}$$
 =

10. 
$$\frac{8}{3}$$
 =

	Review 1	Exercises		Speed Drills
	$\frac{6}{5}$ to a mixed			7 3/9 +
3. Reduc	ge $\frac{10}{4}$ to a mixed of $\frac{4}{6}$ to its lowest fraction			(0) (8) (1) (4) (2) (6)
of the	figure			$\sqrt{\frac{3}{9}}$
denominators, numerators, then questions about y 1. Is the answer fraction? If it is	first add the ask the following	Examples: $\frac{1}{5}$   $\frac{1}{8}$ $\frac{2}{5}$   $+\frac{3}{8}$ $\frac{3}{5}$   $-\frac{4}{8}$ = $\frac{1}{2}$	$\begin{vmatrix} \frac{3}{4} \\ \frac{3}{4} \end{vmatrix}$	0 5 1
mixed numeral of the fraction	or whole number. On be reduced? ce it to its	$\frac{5}{\frac{3}{5}} \mid \frac{8}{\frac{4}{8}} = \frac{1}{2}$	$\frac{6}{4} = 1\frac{2}{4} = 1\frac{1}{2}$	Helpful Hints
S. <u>4</u> 5 3	S. $\frac{5}{6}$	1. $\frac{2}{7}$	2. $\frac{4}{7}$	2
+ 5	+ 6	+ 7	+ 7	3
				4
3. $\frac{3}{5}$	4. $\frac{1}{8}$	5. $\frac{5}{6}$	6. $\frac{7}{8}$	5
$ \begin{array}{c} 3 \\ \hline 5 \\ 4 \\ \hline 5 \end{array} $	4. $\frac{1}{8}$ $\frac{5}{8}$	$5.  \frac{5}{6} \\ + \frac{1}{6}$	6. $\frac{7}{8}$ $\frac{2}{8}$	6
<u>+ 3</u>		<u> </u>		7
7. <u>3</u>	8. 7	9. 7	10. <u>1</u>	8
7. $\frac{3}{8}$ $\frac{1}{8}$	8. $\frac{7}{10}$ $\frac{1}{10}$	9. $\frac{7}{10}$ $\frac{5}{10}$	$ \begin{array}{c} 10.  \underline{\frac{1}{3}} \\  \underline{\frac{1}{3}} \end{array} $	9
+ 8	+ 10	+ 10	+ 3	10

Problem Solving

If  $\frac{1}{8}$  of the kids in a school ride their bikes to school and  $\frac{3}{8}$  walk, what fraction of them either walk or ride their bikes?

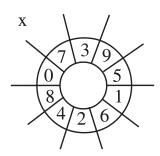
Speed Drills			
+ 7 3 0 8 4/2	9 5 1 6		

Review	Exercises
10011011	Literord

$$\begin{array}{ccc}
1. & \underline{2} \\
& 5 \\
& & 1
\end{array}$$

$$\begin{array}{ccc}
3. & \frac{7}{10} \\
& 5
\end{array}$$

Examples:



Helpful Hints

- 1. Add the fractions first.
- 2. Add the whole numbers next.
- 3. If there is an improper fraction, change it to a mixed numeral.
- 4. Add the mixed numeral to the whole number.
- \*Reduce fractions to lowest terms

$3\frac{1}{8}$	$2\frac{3}{5}$
$+ 2\frac{3}{8}$	$+ 3\frac{4}{5}$
$5\frac{4}{8} = 5\frac{1}{2}$	$\frac{1}{5\frac{7}{5}} = 5 + 1\frac{2}{5} = 6\frac{2}{5}$

- $\frac{+ 2\frac{5}{8}}{5\frac{10}{8}} = 5 + 1\frac{2}{8} = 6\frac{2}{8} = 6\frac{1}{4}$

1
2
3
4

- 5 6
- 3.  $2\frac{1}{6}$  4.  $3\frac{1}{10}$  5.  $3\frac{4}{7}$  6.  $3\frac{5}{6}$

- 7

- 8 10

Score

Katie cooks a pie and a cake. She uses  $\frac{2}{9}$  cups of flour for the cake and  $\frac{1}{9}$  cups for the pie crust. How much flour did she use?

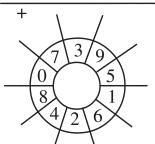
Problem Solving

		Subtracting Wi	in Line Denominators
Review	v Exercises		Speed Drills
To subtract fractions that have like denominators, first subtract the numerators, then, if necessary, reduce the answer to its		$\frac{\frac{5}{6}}{\frac{1}{6}} = \frac{2}{3}$	7 3/9 8 4/2/6 X 7 3/9 X 7 3/9 X 7 3/9 5 1 Helpful
lowest terms.	$\frac{3}{5}$	$\frac{4}{6} = \frac{2}{3}$	Hints
S. $\frac{3}{8}$ S. $\frac{3}{4}$ $-\frac{1}{8}$ $-\frac{1}{4}$	1. $\frac{5}{8}$ - $\frac{1}{8}$	2. $\frac{3}{6}$ - $\frac{1}{6}$	1 2 3
3. $\frac{5}{7}$ 4. $\frac{9}{10}$ $-\frac{2}{10}$	5. $\frac{7}{11}$ - $\frac{4}{11}$	6. $\frac{6}{7}$ - $\frac{1}{7}$	
7. $\frac{7}{10}$ 8. $\frac{7}{8}$ $-\frac{3}{10}$ $-\frac{3}{8}$	9. $\frac{2}{3}$ $-\frac{1}{3}$	10. $\frac{7}{9}$ - $\frac{1}{9}$	8 9 10

Problem Solving John lives  $\frac{4}{5}$  of a mile from school. If he has already walked  $\frac{3}{5}$  of a mile, how much farther does he have to go?

# Speed Drills

#### **Review Exercises**

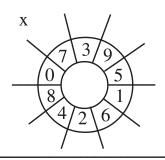


$$\frac{1}{4} + \frac{1}{4}$$

$$\frac{4}{5}$$

$$+ 2\frac{2}{7}$$

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



Helpful Hints

To subtract a fraction or a mixed number from a whole number, take one from the whole number and make it a fraction, then subtract.

#### Examples:

$$\begin{array}{c}
3 \\
4 \\
4 \\
-2 \\
\hline
1 \\
\frac{3}{4}
\end{array}$$

$$\begin{array}{c}
6 \\
\cancel{7} \rightarrow \frac{5}{5} \\
- \frac{3}{5} \\
\hline
6 \frac{2}{5}
\end{array}$$

1
2
3

S. 
$$6$$
 $-2\frac{3}{5}$ 

S. 
$$7 - \frac{3}{4}$$

1. 6 
$$-2^{\frac{4}{7}}$$

2. 
$$5$$
  $-1\frac{3}{5}$ 

3. 
$$7$$
 $\frac{2}{3}$ 

4. 6 
$$-2\frac{9}{10}$$

5. 
$$7$$
 $-2\frac{1}{8}$ 

6. 9 
$$-2\frac{3}{7}$$

7. 
$$7$$
 $-3\frac{7}{9}$ 

8. 
$$4$$
  $-3\frac{1}{2}$ 

9. 
$$6$$
  $-2\frac{3}{10}$ 

10. 
$$\frac{3}{5}$$

Fractions		Subtracting Mix	xed Numerals wi	th Like Denominators
	Review	Exercises		Speed Drills
1. $\frac{2}{3}$ - $\frac{1}{3}$	2. $\frac{3}{4}$ - $\frac{1}{4}$	3. $2\frac{1}{4}$ + $3\frac{1}{4}$	4. 196 - 128	7 3/9 + 0 5 1 1 4/2 6
To subtract mixed with like denoming subtract the fraction then the whole is Reduce the fractions can subtracted as the	tinators, tions first, numbers. tions in the t terms. If n't be	$3\frac{3}{4}$ $- 1\frac{1}{4}$ $2\frac{2}{4} = 2\frac{1}{2}$	$ \frac{3}{\cancel{4} + \frac{4}{4}} = \frac{5}{4} $ $ - 2\frac{3}{4} $ $ \frac{1}{2} = 1\frac{1}{2} $	7 3 9 X 0 5 1 4 2 6
written, take one whole number a the fraction, the	e from the and increase	- 4 - <sub>2</sub>	4 - 2	Helpful Hints
S. $3\frac{3}{4}$	S. $5\frac{1}{3}$	1. $3\frac{3}{5}$	2. $4\frac{3}{6}$	1
$-1\frac{1}{4}$	$-\frac{2\frac{2}{3}}{}$	$-1\frac{2}{5}$	$-1\frac{1}{6}$	2
				3
3. $5\frac{5}{6}$	4. $7\frac{7}{10}$	5. $3\frac{1}{5}$	6. $4\frac{1}{4}$	4
$-\frac{2\frac{1}{6}}{}$	$-2\frac{2}{10}$	$-\frac{1\frac{4}{5}}{}$	$-\frac{2\frac{3}{4}}{}$	5
				6
				7
·	_	9. $7\frac{1}{3}$	_	8
$-\frac{2\frac{1}{7}}{}$	$-\frac{1\frac{7}{8}}{}$	$-\frac{3\frac{2}{3}}{}$	$\frac{-2\frac{1}{5}}{}$	9

Problem Solving

A woman worked  $1\frac{2}{3}$  hours on Monday and  $3\frac{2}{3}$  hours on Tuesday. How many hours did she work in all?

10

Page 5	Page 6	Page 7	Page 8
1. 369	1. 72	1. 108	1. 121
2. 737	2. 573	2. 9,240	2. 216
3. 17	3. 183	3. 3,920	3. 812
4. 15	4. 56	4. 6,653	4. 416
S. 817	S. 5,579	S. 273	S. 423
S. 991	S. 6,691	S. 3,181	S. 133
1. 97	1. 5,001	1. 315	1. 44
2. 101	2. 3,795	2. 241	2. 224
3. 103	3. 9,027	3. 261	3. 437
4. 421	4. 58,257	4. 616	4. 138
5. 962	5. 13,043	5. 1,612	5. 5,727
6. 1,317	6. 10,666	6. 5,907	6. 463
7. 73	7. 8,389	7. 106	7. 324
8. 675	8. 14,957	8. 511	8. 406
9. 472	9. 52,836	9. 7,208	9. 6,731
10. 63	10. 8,922	10. 263	10. 430
Problem Solving: 72 students	Problem Solving: 34,040	Problem Solving: 57 more	Problem Solving: \$78.00

Page 9	Page 10	Page 11	Page 12
1. 33	1. 234	1. 92	1. 1,824
2. 533	2. 64	2. 2,538	2. 864
3. 156	3. 118	3. 464	3. 975
4. 437	4. 4,653	4. 986	4. 616
S. 970	S. 105	S. 1,058	S. 2,538
S. 156	S. 2,592	S. 6,132	S. 9,936
1. 95	1. 129	1. 192	1. 78
2. 381	2. 150	2. 1,200	2. 1,824
3. 7,680	<ol> <li>928</li> <li>944</li> <li>918</li> <li>22,834</li> </ol>	3. 1,692	3. 3,162
4. 1,509		4. 2,852	4. 1,410
5. 674		5. 3,720	5. 1,598
6. 6,842		6. 7,015	6. 5,658
7. 392	7. 2,904	7. 384	7. 864
8. 75	8. 2,616	8. 1,872	8. 21,360
9. 615	9. 1,104	9. 6,968	9. 7,227
10. 982 Problem Solving: 107 seats	10. 14,931 Problem Solving: 224 crayons	10. 13,760 Problem Solving: 256 kids	10. 6,764 Problem Solving: 3,500 sheets

Page 13	Page 14	Page 15	Page 16
1. 218	1. 17 r1	1. 26 r1	1. 246 r2
2. 1,872	2. 9 r1	2. 82 r2	2. 1,491
3. 10,027	3. 944	3. 1,092	3. 543
4. 368	4. 483	4. 152	4. 605
S. 18 r1	S. 144	S. 2,354	S. 81 r2
S. 9 r1	S. 304 r1	S. 863	S. 1071
1. 14 r1	1. 256	1. 863	1. 16
2. 5 r3	2. 409 r1	2. 1,685 r3	2. 150
3. 12 r3	3. 132	3. 856 r2	3. 255
4. 23 r1	4. 82 r2	4. 1,808	4. 34 r3
5. 12 r1	5. 34 r4	5. 1,311	5. 411 r1
6. 7 r1	6. 204 r2	6. 1,498 r3	6. 87 r2
7. 13 r1	7. 121	7. 333	7. 302 r5
8. 24 r1	8. 75 r2	8. 1,383 r1	8. 2,404 r1
9. 12 r1	9. 122 r3	9. 306	9. 1,001 r1
10. 18 r1	10. 158 r5	10. 802 r2	10. 401 r1
Problem Solving: 12 boxes	Problem Solving: 15 seats	Problem Solving: 352 boxes	Problem Solving: \$56.00 each

Page 17	Page 18	Page 19	Page 20
1. 157	1. 481	1. 8 r1	1. 24
2. 341	2. 124	2. 131	2. 222
3. 6,520	3. 726	3. 3 r3	3. 21 r8
4. 101 r2	4. 252	4. 21 r2	4. 21 r1
S. 2 r7	S. 2 r1	S. 21 r2	S. 31 r12
S. 22 r12	S. 2 r1	S. 31	S. 21 r10
1. 1 r12	1. 2 r9	1. 21 r1	1. 8 r1
2. 12 r16	2. 3 r5	2. 21 r3	2. 237 r2
3. 12 r35	3. 2 r5	3. 21 r6	3. 75
4. 16 r6	4. 3	4. 12 r1	4. 145 r1
5. 7 r2	5. 1 r37	5. 29 r20	5. 1,755 r1
6. 13 r5	6. 2 r5	6. 41 r8	6. 2 r2
7. 2 r7	7. 3 r3	7. 21 r4	7. 12 r6
8. 8 r25	8. 3 r1	8. 22 r3	8. 8 r29
9. 12 r8	9. 1 r35	9. 21 r4	9. 21 r6
10. 5 r22	10. 3 r10	10. 31 r7	10. 22 r5
Problem Solving: 12 boxes	Problem Solving: 5 classes	Problem Solving: 156 eggs	Problem Solving: 4 gallons

D	21	D .
Page	1 / L	Review
1 421	<i>-</i>	

- 1. 57
- 2. 591
- 3.949
- 4. 6,855
- 5. 12,753
- 6. 21
- 7. 505
- 8. 532
- 9. 2,918
- 10. 5,633
- 11. 68
- 12. 1,692
- 13. 21,861
- 14. 312
- 15. 5,112
- 16. 8 r1
- 17. 138
- 18. 333 r1
- 19. 21 r12
- 20. 21 r7

#### Page 22

- 1. 54
- 2. 281
- 3. 115
- 4. 672
- S. 1/4
- S. 5/6
- 1. 3/8
- 2. 1/3
- 3. 2/4, 1/2
- 4. 5/8
- 5. 7/8
- $6. \ 2/3$
- 7. 5/6
- 8. 1/6
- 9. 2/6, 1/3
- 10. 3/4

Problem Solving: 6 pounds

#### Page 23

- 1. 852
- 2. 252
- 3. 303
- 4. 21 r8
- S. 1/2
- S. 1/4
- 1. 1/5
- 2. 1/3
- 3. 2/3
- 4. 2/3
- 5. 4/5
- 6. 1/3 7. 1/3
- 8. 1/6
- 9. 3/5
- 10. 1/2

Problem Solving: 18 crayons

#### Page 24

- 1. 3/4
- 2. 2/3
- 3. 21 r2
- 4. 8,460
- S. 1 1/2
- S. 1 1/2
- 1. 1 3/4
- 2. 2 1/2
- 3. 13/5
- 4. 1 3/7
- 5. 1 2/4, 1 1/2
- 6. 1 1/3
- 7. 2 2/5
- 8. 2 1/3
- 9. 2 1/5
- 10. 2 2/3

Problem Solving: 88 more

#### Page 25

- 1. 1 1/5
- 2. 2 1/2
- 3. 2/3
- 4. 1/4
- S. 1 2/5
- S. 1 1/3
- 1. 5/7
- 2. 1 2/7
- 3. 1 1/5
- 4. 3/4
- 5. 1
- 6. 1 1/8
- 7. 1/2
- 8. 4/5
- 9. 1 1/5
- 10. 2/3

Problem Solving: 1/2

#### Page 26

- 1. 3/5
- 2. 2 r9
- 3. 1 1/5
- 4. 233
- S. 5 1/2
- S. 6 1/5
- 1. 5 3/5
- 2. 5 1/4
- 3. 5 1/2
- 4. 5 2/5
- 5. 6 1/7
- 6. 6 1/6
- 7. 6 1/2
- 8. 5 2/3
- 9. 6 1/2
- 10. 5 1/4

Problem Solving: 1/3 cup

#### Page 27

- 1. 3/4
- 2. 2 1/2
- 3. 1 1/5
- 4. 4 1/5
- S. 1/4
- S. 1/2
- 1. 1/2
- 2. 1/3
- 3. 3/7 4. 4/5
- 5. 3/11
- 6. 5/7
- 7. 2/5
- 8. 1/2 9. 1/3

 $10. \ 2/3$ 

Problem Solving: 1/5 of a mile

Page 28	Page 29	Page 30	Page 31
1. 1/2 2. 1 2/5 3. 5 5/7 4. 6 1/5	1. 1/3 2. ½ 3. 5 ½ 4. 68	1. 1/5 2. 1 3. 2 2/3 4. 1/3	1. 5/7 2. 1/2 3. 4 1/2 4. 2 2/3
S. 3 2/5 S. 6 1/4 1. 3 3/7 2. 3 2/5 3. 6 1/3 4. 3 1/10 5. 4 7/8 6. 6 4/7 7. 3 2/9 8. 1/2 9. 3 7/10 10. 4 2/5 Problem Solving: 2 1/2 yards	S. 2 ½ S. 2 2/3 1. 2 1/5 2. 3 1/3 3. 3 2/3 4. 5 1/2 5. 1 2/5 6. 1 1/2 7. 3 8. 1 1/4 9. 3 2/3 10. 1 3/5 Problem Solving: 5 1/3 hour	S. 6 1/6 S. 2 ½ 1. 3/5 2. 3/4 3. 1 1/9 4. 1/4 5. 3 3/4 6. 4 1/3 7. 6 1/5 8. 3 2/3 9. 3/5 10. 1 1/2 Problem Solving: 3 2/3 pounds	S. 12 S. 24 1. 10 2. 8 3. 9 4. 15 5. 10 6. 16 7. 20 8. 10 9. 14 10. 30 Problem Solving: 2,800 miles
Page 32	Page 33	Page 34	Page 35
1. 201 2. 552 3. 253 4. 461 S. 7/12 S. 3/10 1. 11/12 2. 1/6 3. 1 3/10 4. 7/9 5. 1/6	1. 2 r9 2. 3/4 3. 7/12 4. 1/6 S. 5 9/10 S. 8 1/10 1. 5 5/6 2. 5 7/10 3. 5 13/20 4. 4 1/12 5. 5 3/4	1. 13/14 2. 5 1/2 3. 1 3/4 4. 1 2/3 S. 2 1/6 S. 1 7/10 1. 1 5/6 2. 3 1/15 3. 2 5/12 4. 3 7/12 5. 2 1/4	1. 2/3 2. 2 2/5 3. 10 4. 11/15 S. 2 1/4 S. 5 1/4 1. 4/5 2. 11/12 3. 1/10 4. 2 4/5 5. 6 1/3

6. 2 3/10

7. 2 5/6

8. 6 2/15

9. 2 1/8

10. 3 3/10

Problem Solving: 30 students

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Problem Solving:

1 5/8 gallons

6. 1/2

8. 3/4

9. 1/2

10. 1 1/6

7. 11/15

6. 7 5/6

7. 3 7/10

8. 5 11/15

9. 5 11/15

Problem Solving: 360 parts

10. 5 9/20

6. 17/10

7. 6 1/6

8. 1 1/29. 5/8

10. 5 1/10

Problem Solving:

2 3/10 dollars