40 Fun-tabulous Puzzles

for Multiplication, Division, Decimals, Fractions & More!

by Bob Olenych

SCHOLASTIC PROFESSIONAL BOOKS

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Introduction

MATH CAN BE FUN . . . FUN-TABULOUS!

We teachers know that "practice makes perfect"—especially for building computation skills. The puzzles in this book have provided excellent computation practice for my entire class and have motivated my most reluctant students. Many years of experience developing and using puzzles in the classroom have convinced me that when students are engaged by activities such as the puzzles in this book, they will learn effectively and tackle new challenges. While my students are "having fun" solving riddles and working through mazes, they also are building essential skills: addition, subtraction, multiplication and division—the building blocks of mathematics.

WHAT YOU'LL FIND IN THIS BOOK

This book of 40 puzzles is organized by skill areas and includes: number concepts, addition, subtraction, multiplication, division, order of operations, fractions and decimals, graphing, and time. Each section targets particular subskills, which are listed in the table of contents as well as on the practice pages.

CONNECTIONS TO THE MATH STANDARDS

Most of the puzzles in this book target *NCTM 2000* objectives listed under the Number and Operations standard. These objectives include understanding ways to represent numbers, determining meanings of operations and how they relate to one another, and computing with fluency and accuracy. This book is packed with exercises that require students to use the basic operations (addition, subtraction, multiplication, and division) in a variety of patterns—with whole numbers, decimals, and fractions.

"Riddle Time" and other puzzles feature variables, symbols, and graphs that require students to use strategies outlined in the objectives listed under the Algebra standard. Such strategies include understanding patterns, relations, and functions, and analyzing mathematical equations that use variables.

HOW TO USE THIS BOOK

I've been able to use these puzzles to meet a number of instructional goals: I usually assign one of these puzzles as a follow-up to a lesson. I also use these puzzles as review sheets and quizzes to monitor my students' progress in a specific skill area. And because these puzzles are self-correcting, they make ideal independent and homework assignments; a correct assignment will provide a solution to a riddle or a perfect match for numbers in a puzzle. If a student's answer does not correspond with one of the answers provided or it creates a glitch in the riddle, students realize that they've made an error and will double-check their work to arrive at the right solution.

My students eagerly await math period and frequently ask for these puzzles. I'm confident that your students will enjoy and benefit from this collection, too.

Bob Olenych

Name_____ Date _____

NUMBER CONCEPTS

Reveal a Historical Fact

Rewriting words as numbers; place value

Express each number below in its numerical form. Then find your answers in the grid below and cross them out. Answers run horizontally, left to right. Starting from the top left, find each of the remaining letters and print them in order in the boxes at the bottom: The 41 boxes that are left over will reveal a secret message!

1. Two thousand six hundred eleven _____
2. Thirty-four thousand eighty-nine _____
3. Six hundred twenty-six thousand eight hundred fifty-four _____
4. Eight thousand eight _____
5. Six million five hundred thirty-four thousand two hundred eleven _____
6. Forty-eight million nine hundred seven thousand eight hundred sixteen _____
7. Five hundred eight thousand seven hundred ninety-eight _____
8. Eighty million one hundred sixteen thousand two hundred eleven _____
9. Seven thousand seven hundred seven _____
10. Twenty-nine thousand six hundred forty-eight _____

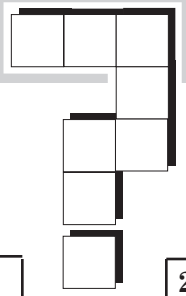
T 6	H 4	E 3	G 4	S 5	S 0	E 8	F 7	P 9	I 8	R 2	E 0	E 0	K 7
A 1	G 2	R 9	B 6	A 4	R 8	N 4	D 9	O 8	O 0	D 0	B 8	R 6	O 8
M 8	A 7	N 3	N 4	I 0	N 8	D 9	N 3	G 9	O 6	B 7	G 7	R 0	A 7
D 6	O 9	F 5	B 6	Y 5	T 3	E 4	R 2	I 1	N 1	S 7	U 1	N 0	A 9
N 4	D 0	Y 0	O 8	G 8	R 0	O 1	A 1	D 6	I 2	G 1	O 1	U 7	T 8
H 3	I 2	G 6	H 1	B 1	W 2	A 2	Y 6	R 2	I 6	B 8	S 5	O 4	S 3
A 2	P 1	O 4	T 4	R 8	I 9	M 0	S 7	H 8	E 1	R 6	L 2	L 4	O 4

Name_____ Date _____

NUMBER CONCEPTS

Cross-Number Puzzle

Rewriting words as numbers; place value



Change each number below to its numerical form and write your answer in the appropriate across or down position.

ACROSS

1. Four thousand seven hundred three

3. Two thousand four hundred thirty-five

4. Five thousand nine

5. One hundred sixty-four thousand five hundred ninety-three

6. Six hundred four thousand five hundred ninety

7. Eighty-five thousand three hundred ninety-six

11. Five hundred forty-six thousand three hundred seventy-one

12. Three hundred forty-eight thousand seven

DOWN

1. Four hundred ninety-three thousand six hundred sixty-six

2. Fifty thousand nine hundred thirty

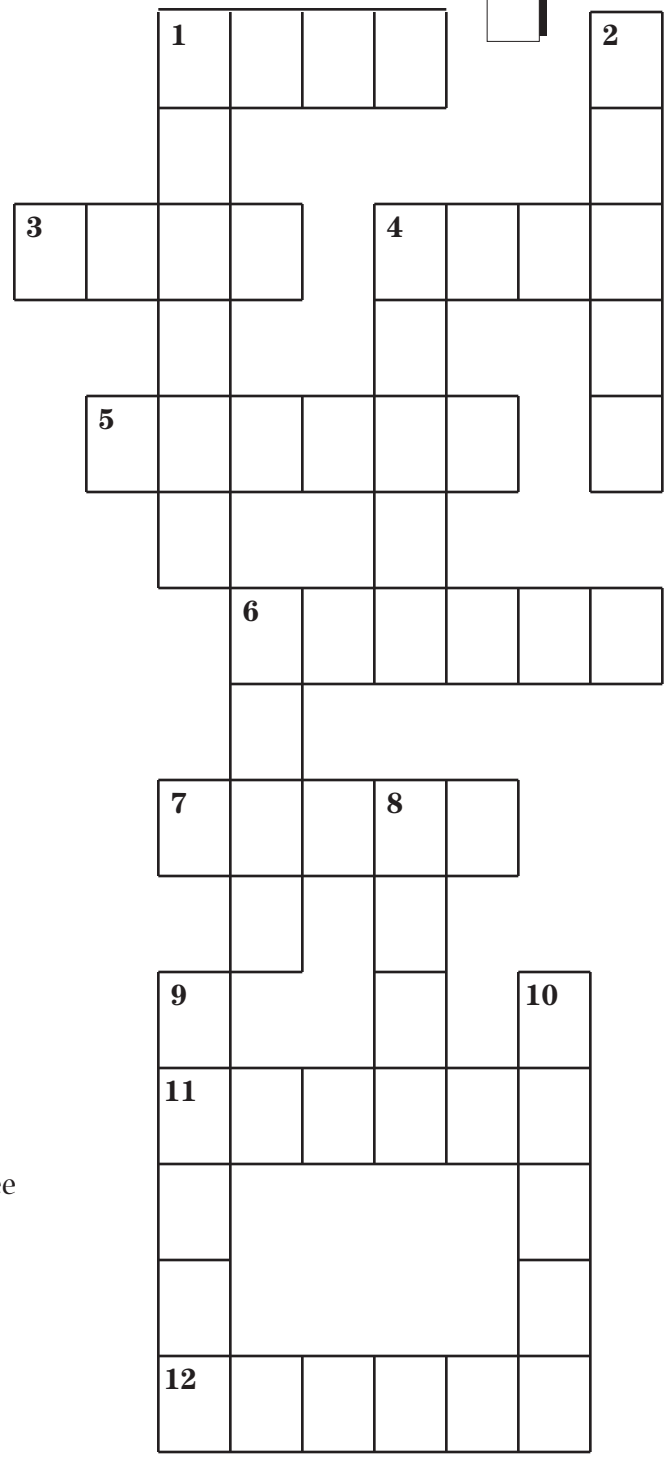
4. Fifty-six thousand nine hundred thirty-four

6. Six thousand four hundred fifty-one

8. Nine thousand four hundred forty-three

9. Twenty-five thousand seven hundred ninety-three

10. Eighty-one thousand two hundred forty-seven



Name_____ Date _____

ADDITION

Fact review

58 Errors

The addition grid below contains 58 errors. Check all of the answers. When you find a mistake, correct it and shade in that box. When you've finished shading the boxes with errors, the shaded grid will spell out the answer to the following riddle:

What always goes to bed with shoes on?

+	39	23	17	42	68	94	75	56	83	49	32	95	57	71	63
5	44	28	22	47	73	99	85	71	89	54	37	100	63	74	69
8	47	31	25	50	76	102	82	64	92	57	40	103	66	79	71
4	43	27	21	45	62	99	78	59	88	54	37	98	62	76	67
7	46	30	24	48	76	100	83	62	90	57	39	102	65	78	70
9	58	32	28	52	77	104	85	65	93	68	42	105	67	82	73
2	40	25	18	43	69	95	77	58	85	51	34	98	59	73	65
6	46	28	25	49	75	98	81	62	89	56	39	100	63	77	69
1	39	24	17	43	69	95	76	57	84	50	33	96	58	72	64
3	52	26	21	45	71	97	78	59	86	52	35	98	60	74	66

_____ _____ _____ _____ _____

Name_____ Date _____

ADDITION

3 digits/
4 addends

Break the Code

Solve the addition problems below. Write the answers in the across and down spaces in the cross-number puzzle. The numbers you write in the shaded boxes show where the letters should go in the code at the bottom to answer the following question:

What word has two vowels, two consonants, and two vowels—all in a row?

ACROSS

2.
790
431
865
+ 307
_____

4.
833
580
735
+ 123
_____

5.
300
909
635
+ 471
_____

6.
394
349
767
+ 676
_____

8.
7,972
6,581
2,451
+ 7,632
_____

DOWN

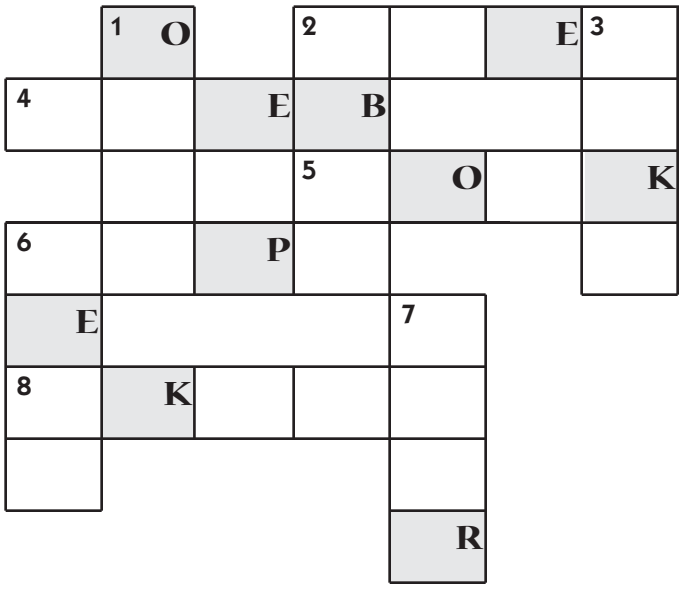
1.
385
535
712
+ 649
_____

2.
535
224
609
+ 758
_____

3.
888
807
830
+ 826
_____

6.
803
572
483
+ 767
_____

7.
866
451
675
+ 628
_____



1	2	3	4	5	6	7	8	9	0

Name_____ Date _____

ADDITION

4 digits/
4 addends

"Sum" Number Search

Add each problem carefully. Locate and circle the answer—the sum—in the number search below. The answers are written horizontally and vertically.

1. 5,569
4,376
2,007
+ 5,432

2. 8,040
4,648
3,948
+ 3,205

3. 5,834
2,468
9,354
+ 2,099

4. 3,603
3,063
9,066
+ 9,909

5. 7,909
6,430
2,058
+ 4,567

6. 7,777
6,666
5,005
+ 6,090

7. 5,834
2,468
3,690
+ 2,200

8. 5,841
2,796
7,976
+ 9,797

9. 3,890
5,009
6,246
+ 3,963

10. 5,893
2,398
5,389
+ 8,477

11. 3,489
5,003
6,070
+ 5,847

12. 3,347
9,969
7,800
+ 7,008

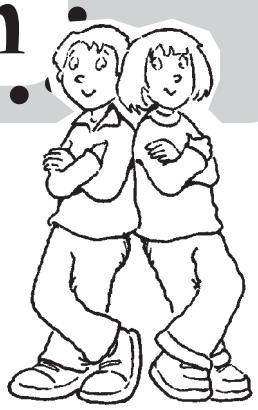
2	0	9	6	4	2	6	4	1	0
5	6	9	3	1	7	3	8	4	9
6	2	2	1	5	7	3	7	1	6
4	5	8	0	2	0	4	0	9	4
1	9	8	4	1	2	8	1	2	4
6	0	1	9	7	5	5	5	7	1
2	5	5	3	8	1	9	1	0	8

Name_____ Date _____

SUBTRACTION

4 digits

What's The Difference? Number Search



Subtract each problem carefully. Locate and circle the answer—the difference—in the number search below. The answers are written horizontally and vertically.

1. 7,906 − 4,537	**2.** 8,800 − 4,675	**3.** 14,768 − 9,794	**4.** 3,908 − 349	**5.** 6,902 − 4,768
6. 5,903 − 3,344	**7.** 7,990 − 6,999	**8.** 14,108 − 6,394	**9.** 7,000 − 395	**10.** 5,934 − 4,376
11. 7,543 − 5,097	**12.** 9,004 − 8,432	**13.** 4,567 − 3,997	**14.** 18,942 − 9,932	**15.** 5,826 − 3,455

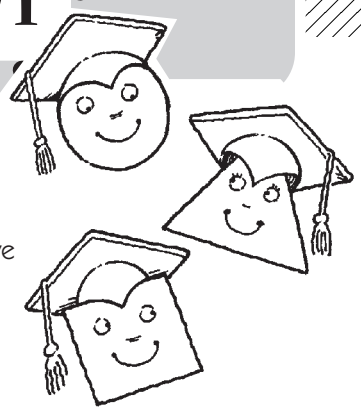
7	6	0	6	4	3	5	7	2	4	7
7	3	3	6	9	5	7	1	5	5	8
1	6	6	0	7	9	0	5	5	3	2
4	1	2	5	4	7	8	2	9	9	1
6	9	9	0	1	0	2	4	4	6	3
3	5	5	9	6	2	3	7	1	5	4

Name_____ Date _____

SUBTRACTION

5 digits

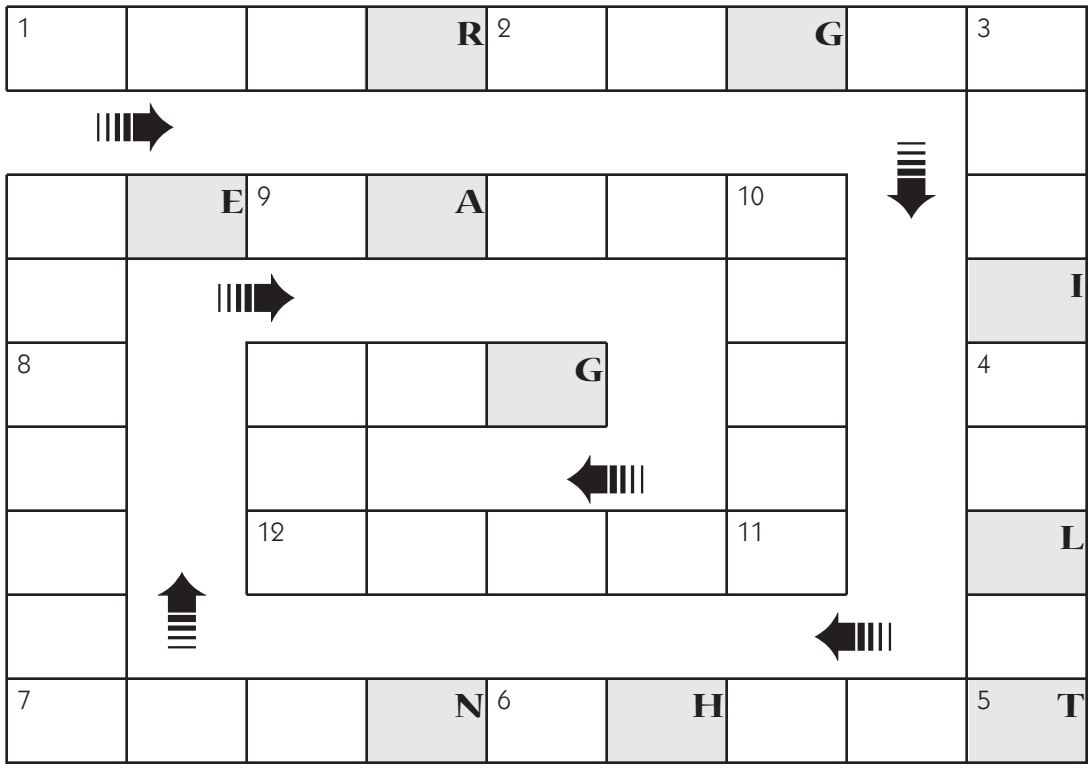
Last Number–First Number #1



Solve the following subtraction problems. Write your answers in the winding puzzle below. **Note: The last digit of each answer becomes the first digit of the next answer.** Be sure to follow the arrows as you fill in the boxes, because you will have to write these answers backward: numbers 5, 6, 7, 8, 11, and 12. After you've finished the puzzle, look at the numbers you've written in the shaded boxes. Each number shows where the letter in that box should go in the code at the bottom to answer the following question:

What geometric figure never makes a mistake?

1. 87,643 − 64,329	**2.** 96,840 − 53,477	**3.** 59,751 − 23,324	**4.** 85,934 − 13,029	**5.** 97,091 − 46,043	**6.** 97,381 − 10,049
7. 77,790 − 56,379	**8.** 65,472 − 50,268	**9.** 86,790 − 40,418	**10.** 57,475 − 30,149	**11.** 94,476 − 34,259	**12.** 87,473 − 12,205



A	1	2	3	4	5		6	7	8	9	0

Name_____ Date _____ SUBTRACTION

5 digits

Solve the Mystery

Solve the ten subtraction problems below. Write the answers in the across and down spaces in the cross-number puzzle. The number in the shaded box shows where the letter should go in the code at the bottom to solve the following riddle:

What illness is difficult to discuss until it's completely cured?

ACROSS

1. 64,208 − 51,099

5. 25,347 − 8,990

6. 38,020 − 17,528

7. 90,844 − 50,227

9. 24,782 − 19,577

DOWN

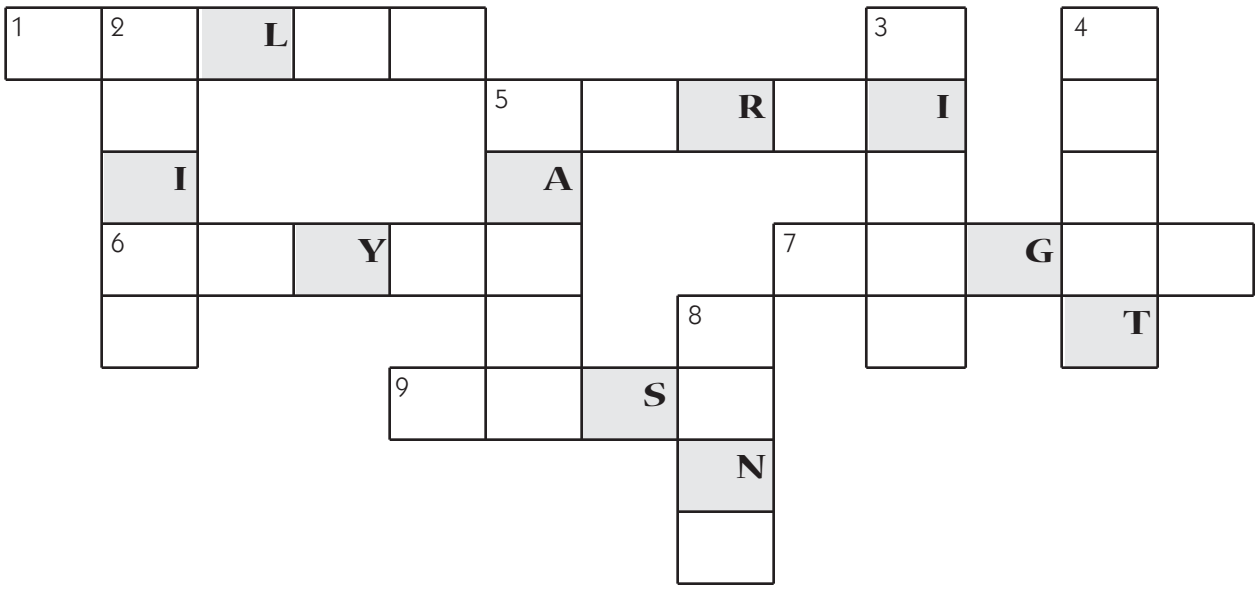
2. 59,344 − 27,422

3. 88,677 − 61,368

4. 75,757 − 31,339

5. 96,471 − 84,249

8. 39,007 − 35,455



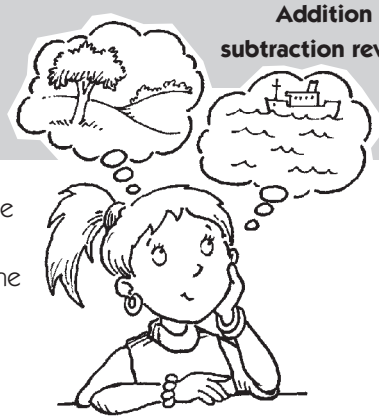
1	2	3	4	5	6	7	8	9	0

Name_____ Date _____

MIXED PRACTICE

What's the Difference Between Land and Sea?

Addition and subtraction review



To figure out this riddle, solve the following problems and find your answers in the code boxes below. Write the letter from each problem in the code box with the matching answer. If the answer appears in more than one code box, fill in each one with the same letter.

E	**P**	**I**	**A**	**O**
5,872 − 3,991	7,340 + 4,663	9,304 − 2,763	4,399 + 7,638	5,493 − 2,488

R	**N**	**T**	**M**	**D**
3,758 + 9,797	6,773 − 4,799	3,276 + 6,723	4,000 − 2,999	9,669 + 7,337

H	**W**	**L**	**Y**	**S**
5,803 − 4,799	4,455 + 6,677	3,090 − 1,909	2,435 + 8,876	8,429 − 7,777

Hint:
There are some extra problems and letters—don't get confused!

9,999	1,004	1,881		1,181	12,037	1,974	17,006		6,541	652		17,006	6,541	13,555	9,999	−	11,311		12,037	1,974	17,006
9,999	1,004	1,881		652	1,881	12,037			6,541	652		9,999	6,541	17,006	1,881	−	11,311	.			

Name_____ Date _____

MIXED PRACTICE

Cross Them Out #1

Addition and subtraction review

Solve all twelve problems below. Locate and cross out each of the correct answers in the grid. Answers run horizontally, left to right. When you have finished, 35 boxes will remain. Write the remaining letters in order to reveal the answer to the following question:

What's the difference between a sailor and a bargain hunter?

1. 5,946 + 7,579	**2.** 6,098 − 2,409	**3.** 4,586 + 7,935	**4.** 9,930 − 8,899
5. 6,439 + 5,782	**6.** 9,354 − 7,839	**7.** 6,843 + 9,447	**8.** 3,289 − 2,199
9. 4,362 + 5,789	**10.** 9,246 − 3,172	**11.** 4,576 + 2,997	**12.** 8,422 − 5,277

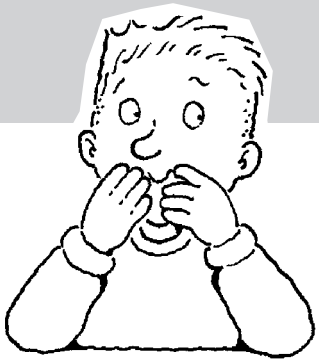
O 5	N 4	F 1	E 0	W 1	T 5	O 1	E 6	S 8	A 2	I 7
E 6	R 0	B 7	A 4	L 4	S 8	D 1	G 0	T 3	P 1	T 7
H 3	E 5	S 2	E 7	R 1	F 3	R 5	S 2	U 5	A 9	S 4
T 2	H 3	G 1	U 6	E 2	P 9	D 0	E 4	O 9	T 7	H 4
E 3	W 3	O 6	K 8	N 9	R 7	S 8	T 1	F 0	S 9	E 0
E 5	E 4	S 9	W 1	E 2	F 5	G 2	D 1	T 4	H 2	E 9
W 7	E 5	L 7	B 3	S 7	A 3	C 3	N 1	M 4	V 5	L 8
E 4	R 1	O 2	Z 2	F 2	W 1	S 8	R 1	D 5	H 1	E 5

Name_____ Date _____

MULTIPLICATION

Facts review

59 Errors



The multiplication grid below contains 59 errors. Check all of the answers. When you find a mistake, correct it and shade in that box. When you've finished shading the boxes with errors, the shaded grid will spell out the answer to the following riddle:

What is too much for one, enough for two, and nothing at all for three?

X	9	6	3	1	0	8	7	2	5	4	3	8	4	9	0	6	7	5
7	63	42	21	7	0	56	42	21	30	29	22	65	28	63	0	42	49	35
3	27	18	9	3	0	24	28	6	15	7	9	21	12	27	0	18	21	15
1	9	6	3	2	1	9	0	2	5	5	4	9	5	10	1	6	7	5
8	72	48	24	9	0	64	65	16	40	28	21	64	28	72	0	48	56	40
6	45	30	12	7	6	48	49	10	36	18	18	42	18	45	0	30	49	36
4	27	24	12	5	0	32	28	8	20	16	12	32	12	36	0	24	21	20
9	72	45	36	10	9	81	63	18	45	36	27	72	45	72	9	54	81	45
2	18	12	5	2	0	16	14	4	10	8	6	16	8	18	0	12	21	10
5	54	36	16	5	0	40	35	10	25	20	15	40	20	45	0	30	30	25

_____ _____ _____ _____ _____ _____

Name_____ Date _____

MULTIPLICATION

Factors and products

What a Mix-Up

Here are four mixed-up multiplication charts. Find the missing **factors** and **products** to complete these charts correctly.

X	5	8	2	6
3				
9		72		
4				
7				

X		4		
7			42	
		36		
2			12	
	40			24

Hint:

In the charts with missing factors, you'll notice some of the products lined up in rows or columns. Use your knowledge of common factors to help you see how these products are related.

X				5
		24	4	
	18			10
			8	
		18		

X				
		14		
	10			8
			18	
	50			

Name_____ Date _____

MULTIPLICATION

1 digit x
3 or 4 digits

Solve the Riddle

Do you know what Mary had when she went out to dinner?

To figure out this riddle, solve the following problems and find your answers in the code boxes below. Write the letter from each problem in the code box with the matching answer. If the answer appears in more than one code box, fill in each one with the same letter.

K 246 × 3 = ____

R 4,035 × 6 = ____

E 319 × 9 = ____

N 8,007 × 5 = ____

D 7,021 × 4 = ____

L 9,306 × 7 = ____

T 999 × 8 = ____

H 6,210 × 2 = ____

I 5,115 × 7 = ____

B 8,020 × 6 = ____

P 583 × 9 = ____

A 967 × 3 = ____

M 532 × 8 = ____

Y 6,039 × 9 = ____

W 826 × 5 = ____

O 3,244 × 3 = ____

5,247	2,871	9,732	5,247	65,142	2,871	738	40,035	9,732	4,130	4,256	2,901	24,210	54,351

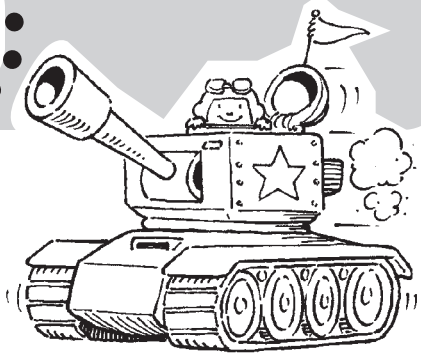
12,420	2,901	28,084	2,901	65,142	35,805	7,992	7,992	65,142	2,871	65,142	2,901	4,256	48,120

Name_____ Date _____

MULTIPLICATION

1 digit x 4 digits

Cross Them Out #2



Solve all nine multiplication problems below. Locate and cross out each of your answers in the grid. When you have finished, 28 boxes will remain. Working horizontally, left to right, write the remaining letters in order in the empty boxes below the grid to reveal the answer to the following question:

What did the father say to his son who wanted to be a tank driver when he grew up?

1. 9,639 × 4 = _____

2. 7,092 × 3 = _____

3. 8,421 × 2 = _____

4. 5,604 × 5 = _____

5. 4,434 × 9 = _____

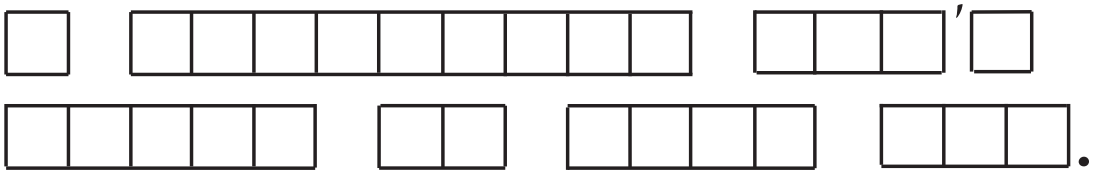
6. 7,638 × 8 = _____

7. 3,333 × 3 = _____

8. 8,089 × 7 = _____

9. 6,532 × 6 = _____

R 5	B 6	E 6	R 2	M 3	I 4	C 8	C 1	A 6	R 8	M 4	S 2
E 6	R 3	S 8	M 5	O 5	R 6	K 3	B 9	R 9	A 0	E 6	R 4
T 7	A 2	I 4	G 2	H 1	T 2	I 7	N 6	N 3	L 8	Y 2	W 7
B 6	R 1	I 1	M 0	S 4	O 6	N 1	T 9	S 3	T 4	A 1	N 1
T 9	R 9	I 9	M 9	D 4	I 2	N 4	I 3	N 9	G 1	S 9	B 2
Y 8	O 7	U 5	U 2	R 8	S 0	T 2	V 0	R 8	W 3	A 7	Y 5

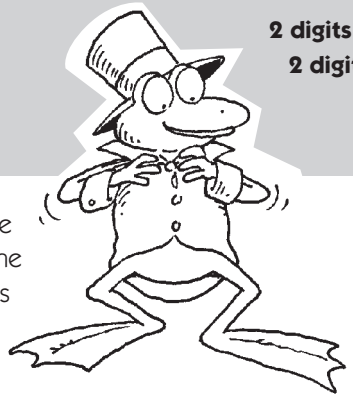


Name_____ Date _____

MULTIPLICATION

Match It #1

2 digits x 2 digits



Use multiplication to solve the problems below, then locate each correct answer in the column on the right. Use a ruler or a straightedge to draw a line from the question to the answer (dot to dot). Your line will pass through a number and a letter. The number tells you where to write your letter in the code boxes to answer the riddle below.

1. 54 x 31 ●

2. 29 x 84 ●

3. 32 x 23 ●

4. 49 x 92 ●

5. 66 x 40 ●

6. 35 x 72 ●

7. 63 x 47 ●

8. 13 x 62 ●

9. 48 x 24 ●

10. 57 x 38 ●

11. 82 x 29 ●

12. 72 x 49 ●

● 4,508

● 2,378

● 2,961

● 1,152

● 2,640

● 736

● 2,166

● 1,674

● 3,528

● 806

● 2,436

● 2,520

A 3 O

K A 9 5 6

12 M R

R 8

10 O 11 4

2 7

C N 1

O

I

Where does a frog change its clothes?

1	2	3	4	5	6	7	8	9	10	11	12

Name______________________ Date ________

MULTIPLICATION

2 digits x 2 digits

Secret Code Time

Why did Godzilla eat Tokyo instead of Rome?

To figure out this riddle, solve the following problems and find your answers in the code boxes below. Write the letter from each problem in the code box with the matching answer. If the answer appears in more than one code box, fill in each one with the same letter.

M	U	N	L
67 × 38	48 × 25	94 × 50	27 × 62

W	T	D	O
53 × 35	79 × 29	58 × 34	41 × 79

I	J	E	F
55 × 84	47 × 24	62 × 37	90 × 30

R	S	A	H
24 × 25	92 × 38	47 × 96	52 × 87

4,524	2,294

1,128	1,200	3,496	2,291

1,855	4,512	3,496

4,700	3,239	2,291

4,620	4,700

2,291	4,524	2,294

2,546	3,239	3,239	1,972

2,700	3,239	600

4,620	2,291	4,512	1,674	4,620	4,512	4,700

2,700	3,239	3,239	1,972

.

Name_____ Date _____

MULTIPLICATION

2 digits x 3 digits

Monster Mystery

Solve the ten multiplication problems below. Write the answers in the across and down spaces in the cross-number puzzle. The numbers in the shaded boxes show where the letters should go in the code at the bottom to solve this riddle:

What did the hungry monster eat after the dentist pulled its tooth?

ACROSS

1. 384 x 64

5. 908 x 62

6. 787 x 78

8. 473 x 64

9. 669 x 66

DOWN

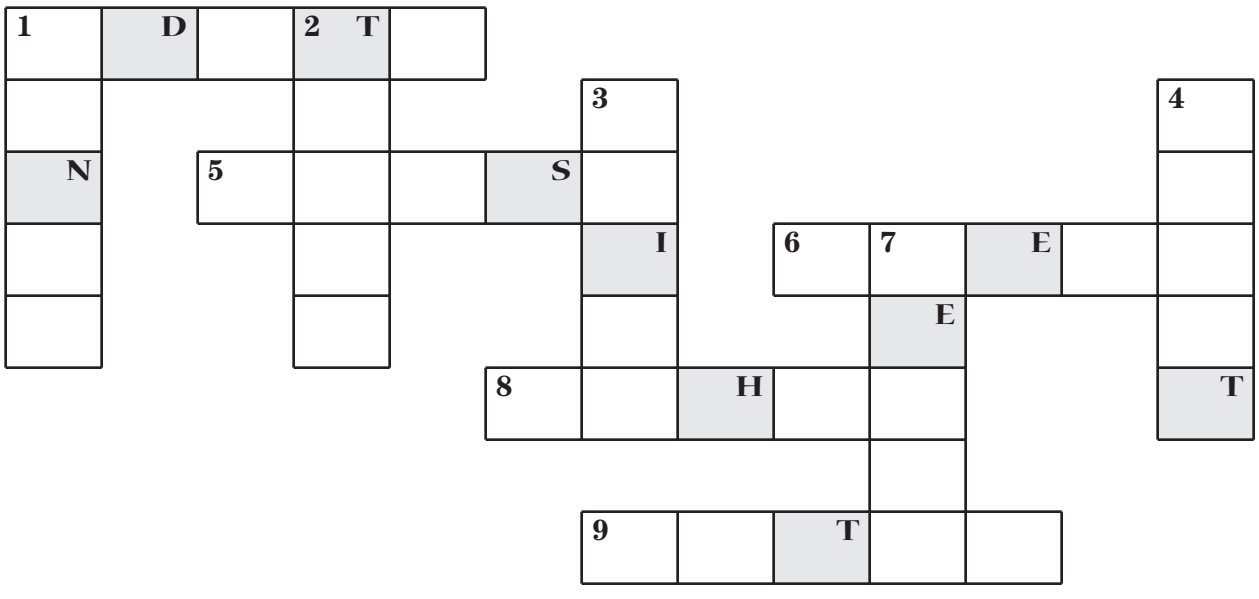
1. 586 x 37

2. 824 x 93

3. 960 x 28

4. 168 x 75

7. 339 x 45



1	2	3

4	5	6	7	8	9	0

Name_____ Date _____ MULTIPLICATION

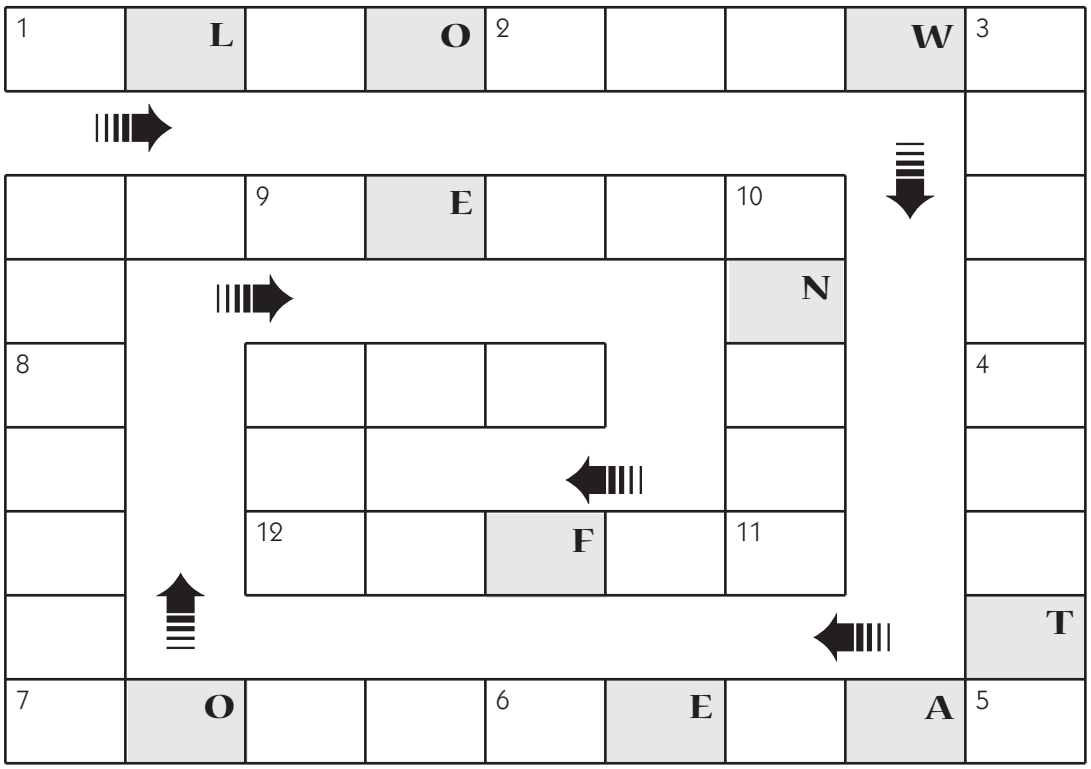
Last Number–First Number #2

2 digits x 3 digits

Solve the following multiplication problems. Write your answers in the winding puzzle below. **Note: The last digit of each answer becomes the first digit of the next answer.** Be sure to follow the arrows as you fill in the boxes, because you will have to write the following answers backward: numbers 5, 6, 7, 8, 11, and 12. After you've finished the puzzle, look at the numbers you've written in the shaded boxes. Each number shows where the letter in that box should go in the code at the bottom to answer this riddle:

What does the announcer say to start a flea race?

1. 467 x 39	**2.** 529 x 64	**3.** 937 x 65	**4.** 833 x 62	**5.** 724 x 83	**6.** 437 x 53
7. 337 x 39	**8.** 972 x 33	**9.** 861 x 74	**10.** 511 x 83	**11.** 947 x 42	**12.** 827 x 53



1	2	3	,	4	5	6	,	7	8	9	0	–	G	O	!

Name_____ Date _____

MIXED PRACTICE

Equal Values #1

Addition, subtraction, and multiplication review

What's the best way to double your money?

Solve all the problems in both sets of boxes. Each answer in the top boxes matches an answer in the bottom boxes. Discover the answer to the question above by writing each word from the top set of boxes in the box below with the matching answer. One example has been done for you.

82 x 3= 246 **IF**	25 x 5= **BUT**	44 x 6= **IT**	74 x 3= **IT**	22 x 8= **FIND**
18 x 8= **IT**	33 x 3= **IF**	51 x 2= **AGAIN**	69 x 7= **YOU**	84 x 5= **BILL**
58 x 5= **FOLD**	30 x 3= **DOUBLE**	80 x 3= **YOU'LL**	16 x 4= **YOU**	70 x 3= **INCREASES**
24 x 9= **UP**	19 x 5= **OPEN**	48 x 1= **THE**	78 x 2= **YOU**	15 x 3= **FIVE-DOLLAR**

11 x 9= _____	8 x 8= _____	29 x 10= _____	12 x 4= _____	5 x 9= _____
60 x 7= _____ ,	500 – 17= _____	45 x 2= _____	259 – 37= _____ .	150 – 25= _____
41 x 6= 246 if	39 x 4= _____	70 + 25= _____	12 x 12= _____	72 x 3= _____
17 x 6= _____ ,	60 x 4= _____	44 x 4= _____	66 x 4= _____	42 x 5= _____ .

Name_____ Date _____

DIVISION

1-digit divisors/
3-digit
quotient

Did You Hear? **Riddles**

Did you hear . . .

about your muscles? NEVER MIND —

122	54	′	442		588		686	69	54		69	123		521	55	442	468	.	

about the rotten pudding? NEVER MIND —

681	69	55		38	69	55	686	222	655	′	54								
442	38	588	686	232	69	38		515	54	.									

To decode these jokes, complete the division problems below and locate the answers in the code boxes below the riddles. Write the letter from the problem above the matching answer in each code box. If the answer appears in more than one code box, fill in each one with the same letter.

W $5\overline{)190}$

O $7\overline{)483}$

D $4\overline{)888}$

L $2\overline{)1,372}$

T $8\overline{)432}$

M $6\overline{)3,126}$

Y $9\overline{)6,129}$

H $3\overline{)1,404}$

S $6\overline{)2,652}$

A $2\overline{)1,176}$

F $9\overline{)1,107}$

U $5\overline{)275}$

N $3\overline{)1,965}$

I $7\overline{)3,605}$

L $4\overline{)928}$

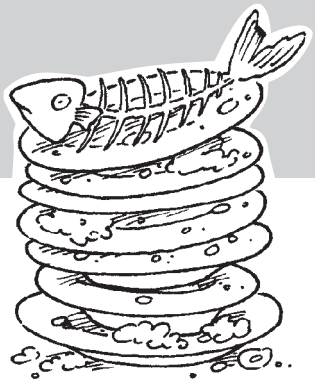
I $8\overline{)976}$

Name_____ Date _____

DIVISION

1-digit divisors/ 3-digit quotient

Remainders



Solve the division problems below. Each answer has a remainder. Write the remainder **in words** in the puzzle below. The clue above the problem tells you where the remainder should go.

1 ACROSS

$9\overline{)708}$

1 DOWN

$8\overline{)743}$

2 ACROSS

$7\overline{)341}$

2 DOWN

$5\overline{)249}$

3 ACROSS

$8\overline{)555}$

3 DOWN

$5\overline{)452}$

4 DOWN

$9\overline{)611}$

5 ACROSS

$8\overline{)713}$

6 ACROSS

$5\overline{)192}$

7 ACROSS

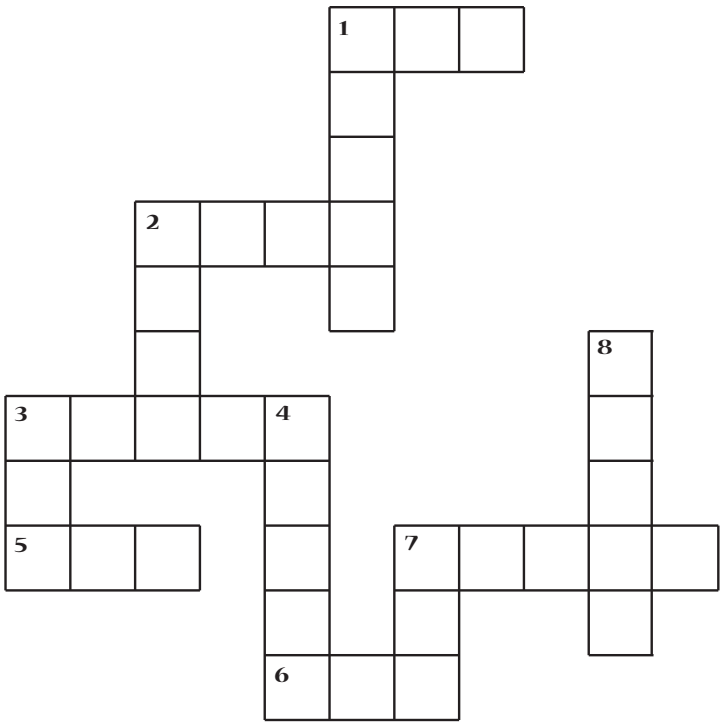
$7\overline{)675}$

7 DOWN

$9\overline{)587}$

8 DOWN

$8\overline{)711}$



Name_____ Date _____

DIVISION

Match It #2

1-digit divisors/ 4-digit quotient

Use division to solve the problems below, then locate each correct answer in the column on the right. Use a ruler or a straightedge to draw a line from the question to the answer (dot to dot). Your line will pass through a number and a letter. The number tells you where to write your letter in the code boxes to answer the riddle below.

1. 5,247 ÷ 9	949
2. 1,230 ÷ 5	560
3. 2,712 ÷ 8	226
4. 2,847 ÷ 3	415
5. 2,658 ÷ 6	339
6. 818 ÷ 2	443
7. 3,920 ÷ 7	764
8. 1,200 ÷ 4	793
9. 6,112 ÷ 8	583
10. 1,356 ÷ 6	300
11. 7,137 ÷ 9	409
12. 2,075 ÷ 5	246

F 3 8 L O 7 N 5 P R E 9 2 Y T O O 11 4 6 12 1 M 10

What do you give a seasick elephant?

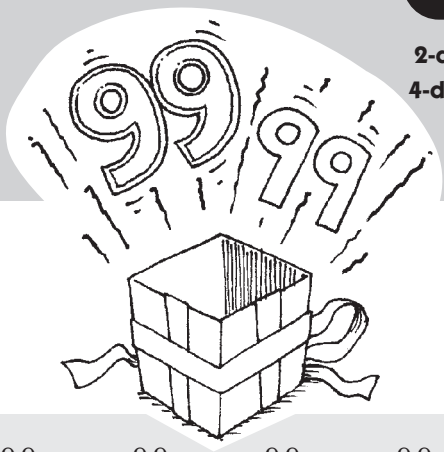
1	2	3	4	5	6		7	8		9	10	11	12

Name_____ Date _____

DIVISION

2-digit divisors/
4-digit quotient

99s



The divisor in all nine of the following problems is 99. The multiples of 99, from 0 to 9, are listed in the box below. Check your final answer against the correct answers in the answer box.

99 x 0 = 0	99 x 1 = 99	99 x 2 = 198	99 x 3 = 297	99 x 4 = 396	99 x 5 = 495	99 x 6 = 594	99 x 7 = 693	99 x 8 = 792	99 x 9 = 891

1. $99\overline{)2,307}$

2. $99\overline{)5,592}$

3. $99\overline{)7,060}$

4. $99\overline{)6,378}$

5. $99\overline{)3,680}$

6. $99\overline{)8,764}$

7. $99\overline{)4,890}$

8. $99\overline{)5,666}$

9. $99\overline{)7,548}$

Hint:
Some problems have remainders that may be longer than the two digit remainders given in the answer boxes.

ANSWER BOX

37 r 17	41 r 14	88 r 52	71 r 31
49 r 39	23 r 30	64 r 42	57 r 23
56 r 48	62 r 26	76 r 24	39 r 39

Name_____ Date _____

DIVISION

2-digit divisors/
4-digit quotient

MORE *Did You Hear?* Riddles

Did you hear . . .

about the rotten food? NEVER MIND—

83	68		68	20	22	66	38						
43	40		38	68	41	43	75	35	86				

.

about the chef who dropped the egg? NEVER MIND—

83	68		35	22	75	39	80	38		43	21		20	13

.

To decode these jokes, complete the division problems below and locate the answers in the code boxes below the riddles. Write the letter from the problem above the matching answer in each code box. If the answer appears in more than one code box, fill in each one with the same letter.

P $64\overline{)832}$ **A** $27\overline{)2{,}025}$ **T** $70\overline{)4{,}760}$ **H** $15\overline{)1{,}290}$

R $48\overline{)1{,}056}$ **O** $98\overline{)4{,}018}$ **U** $20\overline{)400}$ **K** $43\overline{)3{,}440}$

Y $52\overline{)2{,}080}$ **I** $22\overline{)1{,}826}$ **M** $42\overline{)1{,}806}$ **C** $11\overline{)385}$

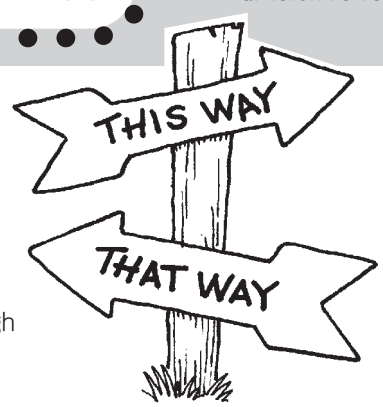
S $74\overline{)2{,}812}$ **C** $84\overline{)3{,}276}$ **E** $77\overline{)1{,}617}$ **N** $55\overline{)3{,}630}$

Name_____ Date _____

MIXED PRACTICE

Follow the Arrows #1

Addition, subtraction, multiplication, and division review



Begin at the ▶. Solve the addition problem and write your answer in the box directly below it. Follow the arrow to the next box and copy your answer from the first box. Solve the next problem, follow the arrow, and copy your new answer in the next open box. Continue to solve the problems, copying each answer into the next box indicated by the arrow. When you've finished the puzzle correctly, your final answer should be the exact number needed to solve the final problem. Go on to the second puzzle and follow the same steps you used to work your way through the first one!

▶ 5,934
2,202
7,864
2,135
+ 796

− 14,473

2)

x 5

− 6,935

5)

842

▶ 6,489
7,351
4,007
+ 6,397

− 23,793

x 39

− 12,375

6)

x 54

− 41,375

5,551

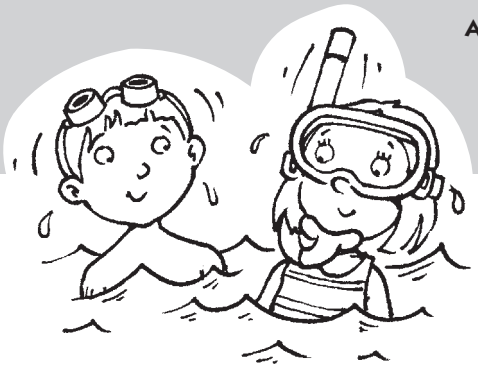
Hint:
As you work through these problems, check your answers by using the reverse operation.
For example: 54 x 3 = 162
check: 162 ÷ 3 = 54

Name_____ Date _____

MIXED PRACTICE

Links

Addition, subtraction, multiplication, and division review



Solve each problem by working from left to right. When you finish a problem, locate the answer in a box below, then write the letter above the answer. If the answer appears in more than one box, fill in each one with the same letter.

Take **48** → Multiply by **8** → Subtract **64** → Divide **4** = _____ = **N**

Take **408** → Add **72** → Divide by **5** → Subtract **19** = _____ = **A**

Take **937** → Subtract **83** → Divide by **7** → Multiply by **9** = _____ = **D**

Take **396** → Divide by **6** → Add **48** → Subtract **78** = _____ = **S**

Take **407** → Add **49** → Divide by **4** → Subtract **70** = _____ = **L**

Take **596** → Multiply by **9** → Subtract **64** → Divide by **5** = _____ = **B**

Take **486** → Divide by **6** → Add **40** → Multiply by **7** = _____ = **G**

Take **784** → Subtract **229** → Divide by **5** → Add **72** = _____ = **U**

Take **420** → Add **777** → Subtract **42** → Divide by **5** = _____ = **Y**

Take **92** → Multiply by **8** → Subtract **1** → Divide by **7** = _____ = **O**

What strange children live in the ocean?

1,060	183	105	231	36

77	80	1,098

847	183	44	44	36

Name_____ Date _____

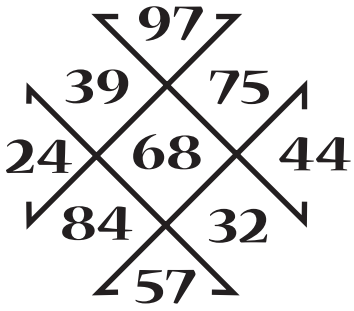
MIXED PRACTICE

Shapely Math #1

Addition, subtraction, multiplication, and division review

Study the shapes in equations 1–6. Each shape has only one match in the number grids. Use the shapes to fill in the missing numbers in the equations. Solve each number sentence. Check your answers against the scrambled answers in the Answer Box.

63	87	35
48	22	74
57	91	46



1. (☐ x ◇ 44) ÷ (◇ 68 – ⌐) = _____

2. (☐ x ◇) ÷ (◇ – ☐) = _____

3. (⌐ x ◇) ÷ (◇ – ⌐) = _____

4. (☐ x ▷) ÷ (▽ – ⊓) = _____

5. (◇ x ☐) ÷ (⌐ – ¬) = _____

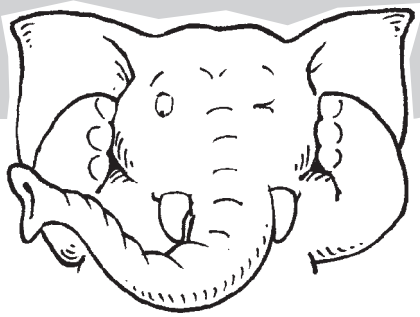
6. (◇ x ⊓) ÷ (⊓ – ◇) = _____

ANSWER BOX

394 r 4	507	461 r 4
768	550	192
422 r 2	35 r 40	1323

Name_____ Date _____

Elephant Trivia



Why did the elephant cross the road?

Solve the problems below. Locate your answer in the code boxes and write the letter from the matching problem above it. If the answer appears in more than one box, fill in each one with the same letter.

J = $(5 \times 6) + (6 \times 3) + (4 \times 9)$ =

L = $(2 \times 8) + (8 \times 6) + (7 \times 3)$ =

O = $(5 \times 7) + (6 \times 9) + (3 \times 5)$ =

D = $(3 \times 8) + (6 \times 4) + (2 \times 12)$ =

I = $(4 \times 8) + (9 \times 5) + (9 \times 4)$ =

T = $(6 \times 6) + (4 \times 7) + (3 \times 9)$ =

S = $(9 \times 7) + (9 \times 6) + (8 \times 6)$ =

W = $(4 \times 9) + (9 \times 9) + (6 \times 7)$ =

K = $(1 \times 9) + (7 \times 8) + (2 \times 8)$ =

E = $(5 \times 5) + (5 \times 7) + (6 \times 5)$ =

N = $(4 \times 8) + (9 \times 0) + (8 \times 4)$ =

H = $(3 \times 3) + (4 \times 4) + (5 \times 5)$ =

A = $(3 \times 7) + (4 \times 7) + (7 \times 9)$ =

R = $(8 \times 8) + (7 \times 7) + (6 \times 6)$ =

50	90		72	113	72	64	,	91		159	112	64	91		
91	104		50	90	112	149		91	50	112	91				
85	112	165	91		84	104	81	90	.						

Name_____ Date _____

Riddle Time

What has 500 teeth and says "Beware of Dog"?

Solve the problems below. Locate your answer in the code boxes and write the letter from the matching problem above it. If the answer appears in more than one box, fill in each one with the same letter.

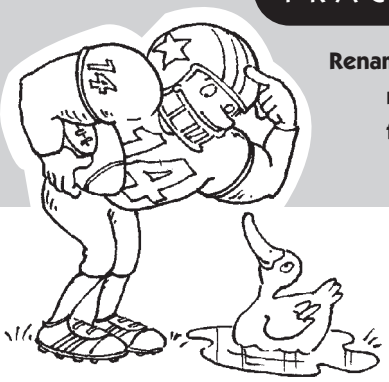
$(5 \times 9) + 3 = \mathbf{T}$	**T** =	$(\mathbf{K} \times 7) + 5 = 54$	**K** =
$(3 \times 9) + 7 = \mathbf{G}$	**G** =	$(5 \times 5) + 6 = \mathbf{C}$	**C** =
$(7 \times 4) + 8 = \mathbf{E}$	**E** =	$(\mathbf{H} \times 8) + 3 = 75$	**H** =
$(\mathbf{A} \times 6) + 4 = 40$	**A** =	$(4 \times 8) + 8 = \mathbf{N}$	**N** =
$(8 \times 8) + 4 = \mathbf{F}$	**F** =	$(\mathbf{S} \times 6) + 5 = 53$	**S** =
$(\mathbf{W} \times 9) + 8 = 53$	**W** =	$(4 \times 4) + 9 = \mathbf{P}$	**P** =
$(6 \times 4) + 9 = \mathbf{I}$	**I** =	$(9 \times 2) + 8 = \mathbf{O}$	**O** =

6		25	33	31	7	36	48												
68	36	40	31	36					5	33	48	9							
6		8	33	34	40				26	40				33	48				

Name_____ Date _____

Equal Values #2

Renaming and reducing fractions



What is the difference between a football player and a duck?

Change the improper fractions in the top boxes to mixed numerals in their simplest form. Then match each answer in the top boxes to an equivalent mixed numeral, expressed in words, in the bottom boxes. Discover the answer to the question above by writing each word from the top set of boxes in the box below with the matching answer. One example has been done for you.

$\frac{5}{3}$ = **DUCK**	$\frac{14}{10} = 1\frac{4}{10} = 1\frac{2}{5}$ **A**	$\frac{9}{6}$ = **PUDDLE**	$\frac{8}{5}$ = **BUT**
$\frac{13}{8}$ = **HUDDLE**	$\frac{17}{14}$ = **A**	$\frac{7}{4}$ = **PLAYER**	$\frac{17}{12}$ = **IN**
$\frac{12}{7}$ = **IN**	$\frac{10}{8}$ = **FOOTBALL**	$\frac{9}{4}$ = **FOUND**	$\frac{11}{6}$ = **IS**
$\frac{9}{7}$ = **A**	$\frac{5}{2}$ = **A**	$\frac{12}{9}$ = **IS**	$\frac{13}{12}$ = **FOUND**

one and two fifths = A	**one and one fourth =** _____	**one and three fourths =** _____	**one and one third =** _____
one and one twelfth = _____	**one and five sevenths =** _____	**two and one half =** _____	**one and five eighths =** _____ ,
one and three fifths = _____	**one and two sevenths =** _____	**one and two thirds =** _____	**one and five sixths =** _____
two and one fourth = _____	**one and five twelfths =** _____	**one and three fourteenths =** _____	**one and one half =** _____ .

Name_____ Date _____ FRACTIONS

A Sharp Riddle

Addition with unlike denominators

If two vampires had a race, who would win?

To figure out this riddle, solve the following problems and find your answers in the code boxes below. Remember to reduce fractions when necessary. Write the letter from each problem in the code box with the matching answer. If the answer appears in more than one code box, fill in each one with the same letter.

D $\frac{2}{3} + \frac{2}{4} =$	**E** $\frac{4}{6} - \frac{1}{3} =$	**F** $\frac{3}{4} - \frac{2}{5} =$	**S** $\frac{1}{6} + \frac{3}{9} =$
T $\frac{4}{5} - \frac{1}{2} =$	**O** $\frac{3}{2} + \frac{2}{3} =$	**R** $\frac{2}{3} + \frac{5}{8} =$	**Y** $\frac{5}{6} - \frac{3}{5} =$
I $\frac{3}{9} + \frac{1}{2} =$	**H** $\frac{3}{4} - \frac{5}{10} =$	**L** $\frac{2}{4} + \frac{5}{6} =$	**C** $\frac{5}{6} - \frac{3}{8} =$
U $\frac{4}{5} - \frac{2}{3} =$	**K** $\frac{3}{4} + \frac{2}{3} =$	**W** $\frac{6}{7} - \frac{2}{3} =$	**N** $\frac{1}{2} + \frac{3}{7} =$

$\frac{13}{14}$	$\frac{1}{3}$	$\frac{5}{6}$	$\frac{3}{10}$	$\frac{1}{4}$	$\frac{1}{3}$	$1\frac{7}{24}$	−	$\frac{3}{10}$	$\frac{1}{4}$	$\frac{1}{3}$	$\frac{7}{30}$	$\frac{4}{21}$	$2\frac{1}{6}$	$\frac{2}{15}$	$1\frac{1}{3}$	$1\frac{1}{6}$

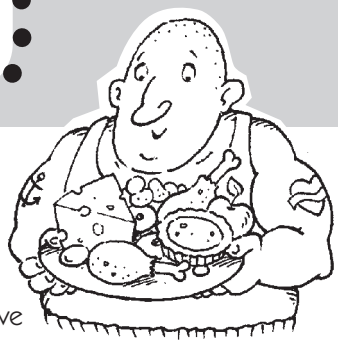
$\frac{7}{20}$	$\frac{5}{6}$	$\frac{13}{14}$	$\frac{5}{6}$	$\frac{1}{2}$	$\frac{1}{4}$		$\frac{13}{14}$	$\frac{1}{3}$	$\frac{11}{24}$	$1\frac{5}{12}$	=	$\frac{5}{6}$	$\frac{13}{14}$	=	$\frac{13}{14}$	$\frac{1}{3}$	$\frac{11}{24}$	$1\frac{5}{12}$

Name_____ Date _____

FRACTIONS

Order of operations

Wrestle the Code



What did the wrestler say when he sat down to eat at the buffet?

Solve the problems below. Remember to reduce fractions when necessary. Locate your answer in the code boxes and write the letter from the matching problem above it. If the answer appears in more than one box, fill in each one with the same letter.

$\left(\frac{2}{8}+\frac{3}{8}\right)-\frac{1}{8}$ = = E	$\frac{7}{8}-\left(\frac{9}{8}-\frac{8}{8}\right)$ = = A
$\frac{5}{6}-\left(\frac{2}{6}+\frac{1}{6}\right)$ = = D	$\left(\frac{2}{3}+\frac{6}{3}\right)-\frac{1}{3}$ = = R
$\left(\frac{8}{9}-\frac{4}{9}\right)+\frac{2}{9}$ = = T	$\frac{12}{6}-\left(\frac{5}{6}+\frac{6}{6}\right)$ = = O
$\frac{4}{5}+\left(\frac{3}{5}-\frac{1}{5}\right)$ = = S	$\frac{5}{4}+\left(\frac{7}{4}-\frac{3}{4}\right)$ = = W
$\left(\frac{2}{7}+\frac{6}{7}\right)-\frac{1}{7}$ = = Y	$\left(\frac{4}{9}+\frac{7}{9}\right)+\frac{1}{9}$ = = N
$\frac{11}{2}-\left(\frac{3}{2}+\frac{5}{2}\right)$ = = I	$\left(\frac{9}{5}+\frac{9}{5}\right)-\frac{3}{5}$ = = L
$\left(\frac{4}{3}+\frac{6}{3}\right)-\frac{5}{3}$ = = H	$\left(\frac{6}{7}-\frac{4}{7}\right)+\frac{4}{7}$ = = F

$\frac{9}{9}-\left(\frac{2}{9}+\frac{2}{9}\right)$ = = G

$1\frac{1}{2}$	$2\frac{1}{3}$	$\frac{1}{2}$	$\frac{3}{4}$	3	3	1	$\frac{1}{3}$	$\frac{1}{6}$	$1\frac{1}{3}$	$\frac{2}{3}$	$2\frac{1}{4}$	$\frac{3}{4}$	$1\frac{1}{3}$	$\frac{2}{3}$	$\frac{3}{4}$	3	3	$\frac{2}{3}$	$1\frac{2}{3}$
$1\frac{1}{2}$	$1\frac{1}{5}$	$\frac{6}{7}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{3}$	$\frac{2}{3}$	$\frac{1}{6}$	$\frac{5}{9}$	$\frac{1}{6}$	$\frac{2}{3}$	$\frac{1}{6}$	$2\frac{1}{4}$	$\frac{3}{4}$	$1\frac{1}{2}$	$1\frac{1}{5}$	$\frac{2}{3}$			

Name_____ Date _____

Decimal Match

Equivalent fractions and decimals

Hint:
Write the expression as a fraction first!
For example: 7/10 = 0.7

Write the answer to each decimal expression in the space provided. Find your answer in one of the boxes at the bottom of the page. In the correct box, write the word that matches your answer. Once you have filled in all the boxes, you will discover the answer to the following riddle:

How do we know football referees are happy?

1. Three tenths = _____ = _____ = **Happy**

2. Thirteen and one thousandth = _____ = _____ = **Know**

3. Four and four hundredths = _____ = _____ = **Are**

4. Seven and fifteen thousandths = _____ = _____ = **Always**

5. Thirteen and one hundredth = _____ = _____ = **While**

6. Four and four thousandths = _____ = _____ = **They**

7. Three hundredths = _____ = _____ = **Referees**

8. Thirteen and one tenth = _____ = _____ = **They**

9. Four and forty thousandths = _____ = _____ = **We**

10. Thirteen and ten hundredths = _____ = _____ = **Work**

11. Four and four tenths = _____ = _____ = **Because**

12. Seven and fifteen hundredths = _____ = _____ = **Whistle**

4.040	13.001	0.03	4.04
0.3	4.4	4.004	7.015
7.15	13.01	13.1	13.10

Name_____ Date _____

Follow the Arrows #2

Begin at the ★. Solve the addition problem and write your answer in the box directly below it. Follow the arrow to the next box and copy your answer from the first box. Solve the next problem, follow the arrow, and copy your new answer in the next open box. Continue to solve the problems, copying each answer into the next box indicated by the arrow. When you've finished the puzzle correctly, your final answer should be the exact number needed to solve the final problem. Go on to the second puzzle and follow the same steps you used to work your way through the first one!

★ 63.27
.359
4.226
43.3
+ 47.356

– 94.076

– 59.735

× 2.5

5 ⟌

× 4

9.4

Hint:
As you work through these problems, check your answers by using the reverse operation.
For example:
2.03 + 34.2 = 36.23
Check:
36.23 – 34.2 = 2.03

★ 3.4
563.0
.345
22.22
+ 6.8

– 591.320

× 6

– 19.02

5 ⟌

× 6.6

– 9.999

0.099

Name_____ Date _____

DECIMALS

Coded Riddle

2 x 3-digit multiplication

Why did the doughnut makers finally close their shop?

To figure out this riddle, solve the following problems and find your answers in the code boxes below. Write the letter from each problem in the code box with the matching answer. If the answer appears in more than one code box, fill in each box with the same letter.

F
$$\begin{array}{r} 0.38 \\ \times\ 29 \end{array}$$

L
$$\begin{array}{r} 87 \\ \times\ 0.9 \end{array}$$

B
$$\begin{array}{r} 584 \\ \times\ 0.6 \end{array}$$

S
$$\begin{array}{r} 4.38 \\ \times\ 29 \end{array}$$

H
$$\begin{array}{r} 5.05 \\ \times\ 87 \end{array}$$

R
$$\begin{array}{r} 0.87 \\ \times\ 38 \end{array}$$

E
$$\begin{array}{r} 7.37 \\ \times\ 43 \end{array}$$

Y
$$\begin{array}{r} 49.4 \\ \times\ 76 \end{array}$$

I
$$\begin{array}{r} 3.77 \\ \times\ 65 \end{array}$$

P
$$\begin{array}{r} 594 \\ \times\ 6.6 \end{array}$$

D
$$\begin{array}{r} 3.39 \\ \times\ 93 \end{array}$$

W
$$\begin{array}{r} 77.7 \\ \times\ 48 \end{array}$$

N
$$\begin{array}{r} 43.7 \\ \times\ 38 \end{array}$$

U
$$\begin{array}{r} 562 \\ \times\ 8.4 \end{array}$$

O
$$\begin{array}{r} 2.24 \\ \times\ 68 \end{array}$$

T
$$\begin{array}{r} 39.7 \\ \times\ 78 \end{array}$$

3,096.6	439.35	316.91	3,754.4

3,729.6	316.91	33.06	316.91

11.02	316.91	315.27

4,720.8	3,920.4

3,729.6	245.05	3,096.6	439.35

3,096.6	439.35	316.91

439.35	152.32	78.3	316.91

350.4	4,720.8	127.02	245.05	1,660.6	316.91	127.02	127.02

Name________________________ Date __________

DECIMALS

Multiple step operations

Decimal Fun

Solve each problem by working from left to right. When you finish a problem, locate the answer in a box below, then write the letter above the answer. If the answer appears in more than one box, fill in each one with the same letter.

Take **47**	→ Subtract **6.55**	→ Add **0.22**	→ Multiply by **0.7**	= ________	= **R**
Take **8.63**	→ Add **26.4**	→ Multiply by **35**	→ Subtract **16.5**	= ________	= **T**
Take **13.779**	→ Multiply by **8**	→ Subtract **4.662**	→ Add **39.44**	= ________	= **N**
Take **58.2**	→ Add **66.489**	→ Subtract **123.457**	→ Add **8**	= ________	= **S**
Take **5.5**	→ Add **4.505**	→ Multiply by **7**	→ Subtract **20**	= ________	= **C**
Take **2.2**	→ Multiply by **8.4**	→ Subtract **1.477**	→ Add **0.33**	= ________	= **D**
Take **589**	→ Subtract **9.87**	→ Multiply by **0.4**	→ Add **0.048**	= ________	= **H**
Take **22.2**	→ Add **9.8**	→ Multiply by **6.5**	→ Subtract **0.65**	= ________	= **I**
Take **88.8**	→ Multiply by **0.4**	→ Subtract **15.32**	→ Add **50.8**	= ________	= **E**
Take **799**	→ Subtract **763.4**	→ Add **8.4**	→ Multiply by **9**	= ________	= **G**

Why did the hen always lift eggs?

9.232	231.7	71

145.01	71	71	17.333	71	17.333

1,209.55	231.7	71

71	396	396	9.232	—	71	28.469	50.035	207.35	9.232	71 .

Name_____ Date _____

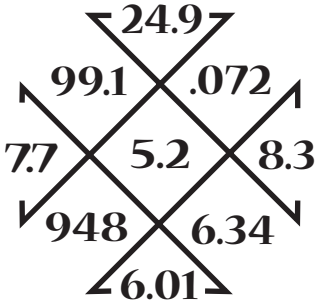
DECIMALS

Order of operations

Shapely Math #2

Study the shapes in equations 1–6. Each shape has only one match in the number grids. Use the shapes to fill in the missing numbers in the equations. Solve each number sentence. Check your answers against the scrambled answers in the Answer Box.

66	6.38	.007
4.3	84.1	.407
35.4	4.01	6.7



1. (☐ − 4.01) + (35.4 − ◇) =

2. (◁ − ⌊) + (◁ − ⌜) =

3. (◇ − ⌊) + (⌷ − ⌒) =

4. (◇ − □) + (▷ − ⌜) =

5. (◇ − ⌊) + (◁ − ⌷) =

6. (▽ − ☐) + (☐ − ⌝) =

ANSWER BOX

593.6	69.3	953.926
16.0	30.49	11.34
1.665	18.66	33.47

Name________________________________ Date __________

DECIMALS

Order of operations

No Kidding!

What's the tallest building in town?

Solve the problems below. Locate your answer in the code boxes and write the letter from the matching problem above it. If the answer appears in more than one box, fill in each one with the same letter.

(0.5 x 3) + 0.3 = C **C** = __________

(S x 0.9) + 0.2 = 4.7 **S** = __________

(6 x 0.3) + 2.5 = M **M** = __________

(0.7 x 0.7) + 0.12 = E **E** = __________

(8 x 0.6) + R = 5.0 **R** = __________

(2.2 x 4) + 0.7 = A **A** = __________

(0.3 x 0.3) + 0.23 = H **H** = __________

(8 x 0.7) + L = 6.3 **L** = __________

(7 x 7) + I = 49.3 **I** = __________

(0.4 x 0.8) + 0.07 = Y **Y** = __________

(0.4 x B) + 0.03 = 0.19 **B** = __________

(0.9 x 0.5) + O = 0.49 **O** = __________

(9 x 0.3) + U = 3.5 **U** = __________

(T x 0.9) + 0.4 = 7.6 **T** = __________

8	0.32	0.61

0.7	0.3	0.4	0.2	9.5	0.2	0.39

,

0.4	0.61	1.8	9.5	0.8	5	0.61

0.3	8

0.32	9.5	5

8	0.32	0.61

4.3	0.04	5	8

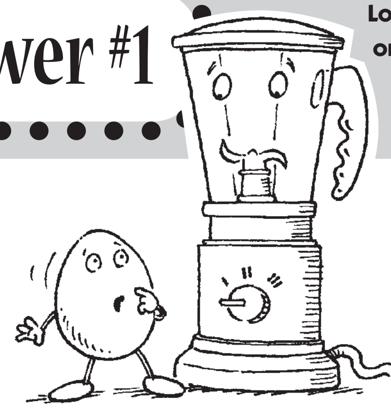
5	8	0.04	0.2	0.3	0.61	5

.

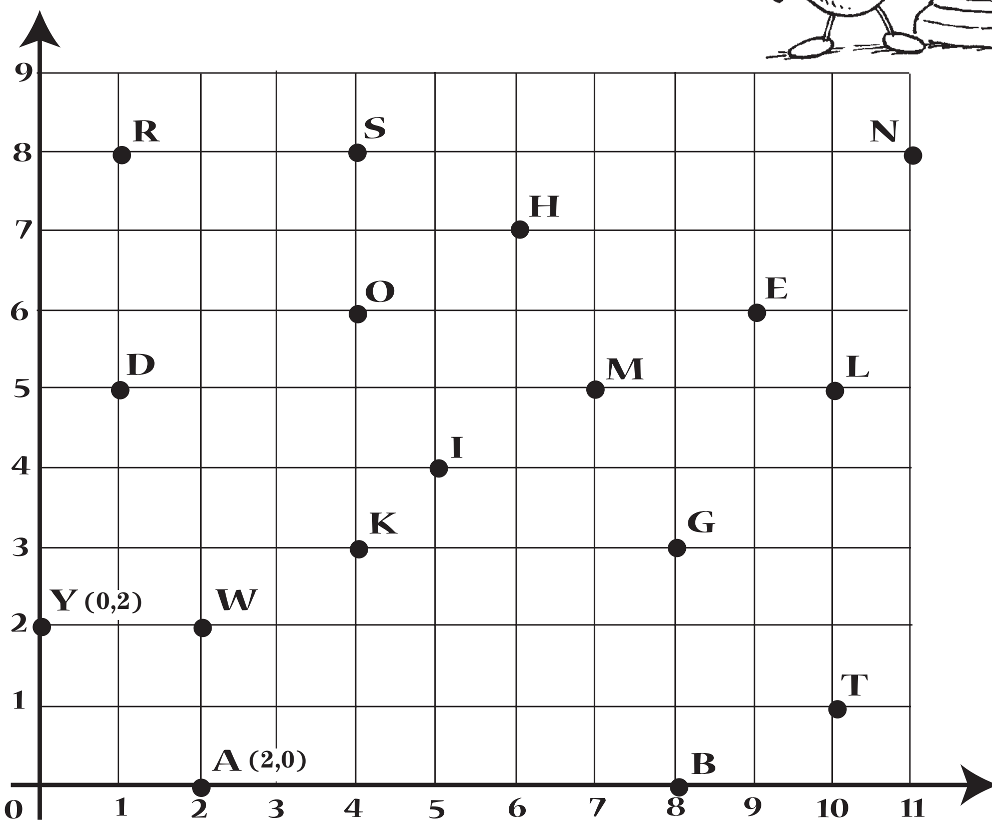
Name________________________________ Date __________

Hidden Question and Answer #1

Locating ordered pairs



Read the ordered pairs (for example, 0,2) listed in the code boxes below. Find the letter of the alphabet that names each point given. Write the correct letter in the box above the ordered pair. Reveal a hidden question and answer.



Question

(2,2)	(6,7)	(2,0)	(10,1)		(1,5)	(5,4)	(1,5)		(10,1)	(6,7)	(9,6)		(9,6)	(8,3)	(8,3)			

(4,8)	(2,0)	(0,2)		(10,1)	(4,6)		(10,1)	(6,7)	(9,6)		(8,0)	(10,5)	(9,6)	(11,8)	(1,5)	(9,6)	(1,8)	?

Answer

(5,4)		(4,3)	(11,8)	(4,6)	(2,2)		(2,2)	(6,7)	(9,6)	(11,8)		(5,4)	'	(7,5)

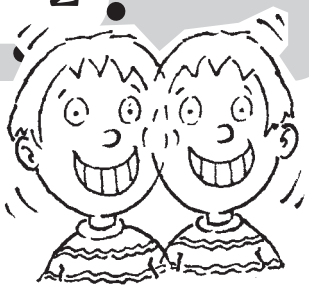
(8,0)	(9,6)	(2,0)	(10,1)	(9,6)	(11,8)	.

Name_____ Date _____

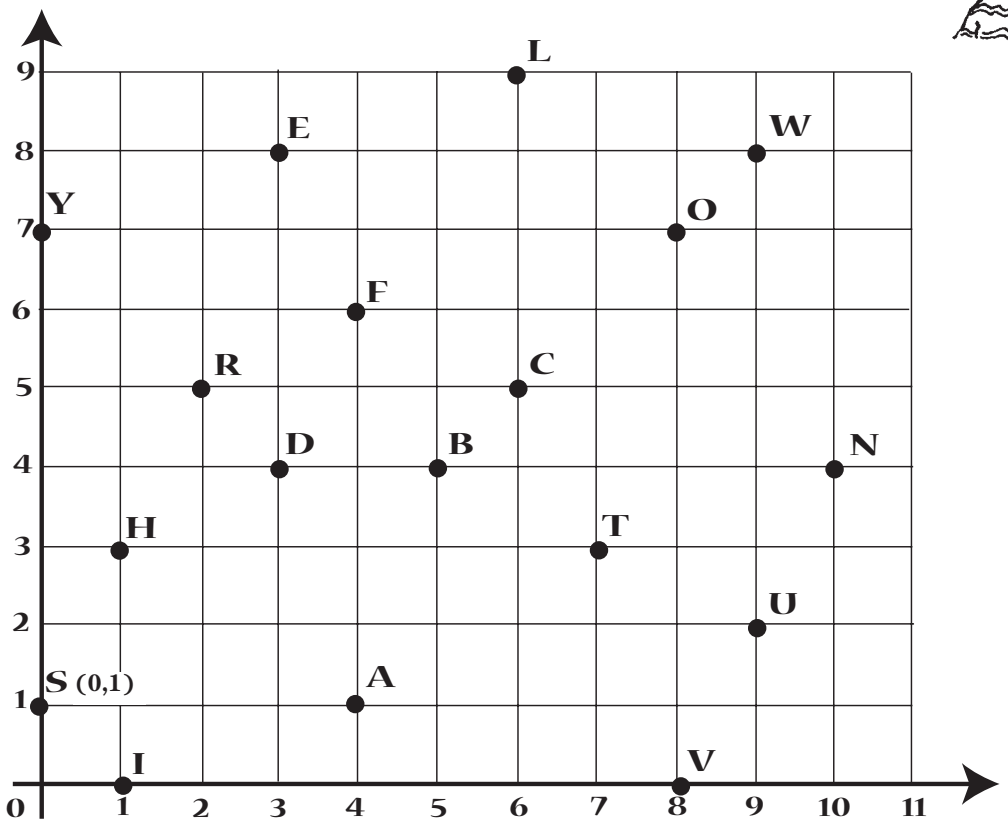
GRAPHING

Locating ordered pairs

Hidden Question and Answer #2



Read the ordered pairs (for example, 0,1) listed in the code boxes below. Find the letter of the alphabet that names each point given. Write the correct letter in the box above the ordered pair. Reveal a hidden question and answer.



Question

(9,8)	(1,3)	(4,1)	(7,3)	(1,0)	(0,1)	(7,3)	(1,3)	(3,8)	(5,4)	(3,8)	(0,1)	(7,3)			
(6,5)	(9,2)	(2,5)	(3,8)	(4,6)	(8,7)	(2,5)	(3,4)	(8,7)	(9,2)	(5,4)	(6,9)	(3,8)			
(8,0)	(1,0)	(0,1)	(1,0)	(8,7)	(10,4)	?									

Answer

(0,1)	(1,3)	(9,2)	(7,3)	(8,7)	(10,4)	(3,8)	(3,8)	(0,7)	(3,8)	.	

Name_____ Date _____

TIME

Converting hours, minutes, and seconds

A Timely Puzzle

Write the answer to each problem in the space provided. Locate your answer in the boxes below, then write the word that is next to your answer in that box. Continue answering all the questions until you have decoded the following riddle:

Why did the downhill skier wear just one boot?

1. If you fall asleep at 9:15 P.M. and you wake up at 9:15 A.M., how many minutes did you sleep? = _____ = **That**

2. If it's 6:15 A.M., what will the time be 46 minutes later? = _____ = **The**

3. A diver holds his breath for 186 seconds. How many minutes and seconds is that? = _____ = **The**

4. Mom's commute to work takes 46 minutes and she arrives at work at 8:20 A.M. When did she leave home? = _____ = **One**

5. You leave the house at 8:12 A.M. and arrive at school at 8:31 A.M. How many seconds did it take you to get there? = _____ = **Heard**

6. Sunrise is at 6:13 A.M. and sunset is at 7:16 P.M. How many hours and minutes of sunlight did we have? = _____ = **Snow**

7. How many minutes have elapsed between 9:00 A.M. and 11:12 A.M.? = _____ = **Foot**

8. If your gym, music, art, and math classes are 40 minutes each, what is the total number of hours and minutes? = _____ = **Trail**

9. Two race car drivers finished a race in 46 minutes 30 seconds and 43 minutes 29 seconds, respectively. How much faster was the winner? = _____ = **He**

10. If the fire drill interrupted class for 15 minutes, how many seconds of class did you miss? = _____ = **Along**

11. If it's 3:30 P.M., how much time has passed since 1:25 P.M.? = _____ = **Deep**

12. It takes 12 minutes and 36 seconds to walk around the city block. How many seconds did it take? = _____ = **Was**

3 minutes, 1 second	1,140 seconds	720 minutes	7:01 A.M.
13 hours, 3 minutes	900 seconds	3 minutes, 6 seconds	2 hours, 40 minutes
756 seconds	7:34 A.M.	132 minutes	2 hours, 5 minutes

Answers

Reveal a Historical Fact (page 5)

1. 2,611
2. 34,089
3. 626,854
4. 8,008
5. 6,534,211
6. 48,907,816
7. 508,798
8. 80,116,211
9. 7,707
10. 29,648

The Greek and Roman god of sun and youth was Apollo.

Cross-Number Puzzle (page 6)

ACROSS
1. 4,703
3. 2,435
4. 5,009
5. 164,593
6. 604,590
7. 85,396
11. 546,371
12. 348,007

DOWN
1. 493,666
2. 50,930
4. 56,934
6. 6,451
8. 9,443
9. 25,793
10. 81,247

+	39	23	17	42	68	94	75	56	83	49	32	95	57	71	63
5	44	28	22	47	73	99	80	61	88	54	37	100	62	76	68
8	47	31	25	50	76	102	83	64	91	57	40	103	65	79	71
4	43	27	21	46	72	98	79	60	87	53	36	99	61	75	67
7	46	30	24	49	75	101	82	63	90	56	39	102	64	78	70
9	48	32	26	51	77	103	84	65	92	58	41	104	66	80	72
2	41	25	19	44	70	96	77	58	85	51	34	97	59	73	65
6	45	29	23	48	74	100	81	62	89	55	38	101	63	77	69
1	40	24	18	43	69	95	76	57	84	50	33	96	58	72	64
3	42	26	20	45	71	97	78	59	86	52	35	98	60	74	66

58 Errors (page 7)

What always goes to bed with shoes on? *Horse*

Break the Code (page 8)

ACROSS
2. 2,393
4. 2,271
5. 2,315
6. 2,186
8. 24,636

DOWN
1. 2,281
2. 2,126
3. 3,351
6. 2,625
7. 2,620

What word has two vowels, two consonants, and two vowels—all in a row? *Bookkeeper*

"Sum" Number Search (page 9)

1. 17,384
2. 19,841
3. 19,755
4. 25,641
5. 20,964
6. 25,538
7. 14,192
8. 26,410
9. 19,108
10. 22,157
11. 20,409
12. 28,124

2	0	9	6	4	2	6	4	1	0
5	6	9	3	1	7	3	8	4	9
6	2	2	1	5	7	3	7	1	6
4	5	8	0	2	0	4	0	9	4
1	9	8	4	1	2	8	1	2	4
6	0	1	9	7	5	5	5	7	1
2	5	5	3	8	1	9	1	0	8

What's the Difference?

Number Search (page 10)

1. 3,369
2. 4,125
3. 4,974
4. 3,559
5. 2,134
6. 2,559
7. 991
8. 7,714
9. 6,605
10. 1,558
11. 2,446
12. 572
13. 570
14. 9010
15. 2,371

7	6	0	6	4	3	5	7	2	4	7
7	3	3	6	9	5	7	1	5	5	8
1	6	6	0	7	9	0	5	5	3	2
4	1	2	5	4	7	8	2	9	9	1
6	9	9	0	1	0	2	4	4	6	3
3	5	5	9	6	2	3	7	1	5	4

Last Number – First Number #1 (page 11)

1. 23,314
2. 43,363
3. 36,427
4. 72,905
5. 51,048
6. 87,332
7. 21,411
8. 15,204
9. 46,372
10. 27,326
11. 60,217
12. 75,268

What geometric figure never makes a mistake? *A right angle*

Solve the Mystery (page 12)

ACROSS
1. 13,109
5. 16,357
6. 20,492
7. 40,617
9. 5,205

DOWN
2. 31,922
3. 27,309
4. 44,418
5. 12,222
8. 3,552

What illness is difficult to discuss until it's completely cured? *Laryngitis*

What's the Difference Between Land and Sea? (page 13)

E	1,881	P	12,003	I	6,541
A	12,037	O	3,005	R	13,555
N	1,974	T	9,999	M	1,001
D	17,006	H	1,004	W	11,132
L	1,181	Y	11,311	S	652

The land is dirt-y and the sea is tide-y.

Cross Them Out #1 (page 14)

1. 13,525
2. 3,689
3. 12,521
4. 1,031
5. 12,221
6. 1,515
7. 16,290
8. 1,090
9. 10,151
10. 6,074
11. 7,573
12. 3,145

What's the difference between a sailor and a bargain hunter? *One sails the seas, the other sees the sales.*

59 Errors (page 15)

x	9	6	3	1	0	8	7	2	5	4	3	8	4	9	0	6	7	5
7	63	42	21	7	0	56	49	14	35	28	21	56	28	63	0	42	49	35
3	27	18	9	3	0	24	21	6	15	12	9	24	12	27	0	18	21	15
1	9	6	3	1	0	8	7	2	5	4	3	8	4	9	0	6	7	5
8	72	48	24	8	0	64	56	16	40	32	24	64	32	72	0	48	56	40
6	54	36	18	6	0	48	42	12	30	24	18	48	24	54	0	36	42	30
4	36	24	12	4	0	32	28	8	20	16	12	32	16	36	0	24	28	20
9	81	54	27	9	0	72	63	18	45	36	27	72	36	81	0	54	63	45
2	18	12	6	2	0	16	14	4	10	8	6	16	8	18	0	12	14	10
5	45	30	15	5	0	40	35	10	25	20	15	40	20	45	0	30	35	25

What is too much for one, enough for two, and nothing at all for three? *Secret*

What a Mix-Up (page 16)

x	5	8	2	6
3	15	24	6	18
9	45	72	18	54
4	20	32	8	24
7	35	56	14	42

x	5	4	6	3
7	35	28	42	21
9	45	36	54	27
2	10	8	12	6
8	40	16	48	24

Note: There can be more than one solution to the following 2 boxes.

x	9	6	1	5
4	36	24	4	20
2	18	12	2	10
8	72	48	8	40
3	27	18	3	15

x	10	7	3	8
2	20	14	6	16
1	10	7	3	8
6	60	42	18	48
5	50	35	15	40

Solve the Riddle (page 17)

K	738	R	24,210	E	2,871	N	40,035
D	28,084	L	65,142	T	7,992	H	12,420
I	35,805	B	48,120	P	5,247	A	2,901
M	4,256	Y	54,351	W	4,130	O	9,732

Do you know what Mary had when she went out to dinner? *People know Mary had a little lamb.*

Cross Them Out #2 (page 18)

1. 38,556
2. 21,276
3. 16,842
4. 28,020
5. 39,906
6. 61,104
7. 9,999
8. 56,623
9. 39,192

What did the father say to his son who wanted to be a tank driver when he grew up? *I certainly won't stand in your way.*

Match It #1 (page 19)

1. 1,674	**2.** 2,436	**3.** 736
4. 4,508	**5.** 2,640	**6.** 2,520
7. 2,961	**8.** 806	**9.** 1,152
10. 2,166	**11.** 2,378	**12.** 3,528

Where does a frog change its clothes? *In a croak room*

Secret Code Time (page 20)

M 2,546	U 1,200	N 4,700	L 1,674
W 1,855	T 2,291	D 1,972	O 3,239
I 4,620	J 1,128	E 2,294	F 2,700
R 600	S 3,496	A 4,512	H 4,524

Why did Godzilla eat Tokyo instead of Rome? *He just was not in the mood for Italian food.*

Monster Mystery (page 21)

ACROSS	DOWN
1. 24,576	**1.** 21,682
5. 56,296	**2.** 76,632
6. 61,386	**3.** 26,880
8. 30,272	**4.** 12,600
9. 44,154	**7.** 15,255

What did the hungry monster eat after the dentist pulled its tooth? *The dentist*

Last Number – First Number #2 (page 22)

1. 18,213	**2.** 33,856		
3. 60,905	**4.** 51,646		
5. 60,092	**6.** 23,161		
7. 13,143	**8.** 32,076		
9. 63,714	**10.** 42,413		
11. 39,774	**12.** 43,831		

What does the announcer say to start a flea race? *One, Two, Flea – GO!*

Equal Values (page 23)

246	125	264	222	176
144	99	102	483	420
290	90	240	64	210
216	95	48	156	45

99	64	290	48	45
420	483	90	222	125
246	156	95	144	216
102	240	176	264	210

What's the best way to double your money? *If you fold the five-dollar bill, you double it.But if you open it up again you'll find it increases.*

***Did You Hear?* Riddles** (page 24)

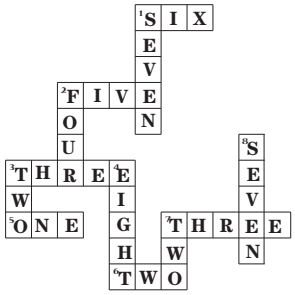
W 38	O 69	D 222	L 686
T 54	M 521	Y 681	H 468
S 442	A 588	F 123	U 55
N 655	I 515	L 232	I 122

About your muscles? *Never Mind – It's a lot of mush.*

About the rotten pudding? *Never Mind – You wouldn't swallow it.*

Remainders (page 25)

ACROSS	DOWN
1. 78 r 6	**1.** 92 r 7
2. 48 r 5	**2.** 49 r 4
3. 69 r 3	**3.** 90 r 2
5. 89 r 1	**4.** 67 r 8
6. 38 r 2	**7.** 65 r 2
7. 96 r 3	**8.** 88 r 7



Match It #2 (page 26)

1. 583	**2.** 246	**3.** 339	**4.** 949
5. 443	**6.** 409	**7.** 560	**8.** 300
9. 764	**10.** 226	**11.** 793	**12.** 415

What do you give a seasick elephant? *Plenty of room*

99s (page 27)

1. 23 r 30	**2.** 56 r 48	**3.** 71 r 31
4. 64 r 42	**5.** 37 r 17	**6.** 88 r 52
7. 49 r 39	**8.** 57 r 23	**9.** 76 r 24

More *Did You Hear?* Riddles (page 28)

P 13	A 75	T 68	H 86
R 22	O 41	U 20	K 80
Y 40	I 83	M 43	C 35
S 38	C 39	E 21	N 66

About the rotten food? Never mind – *it turns my stomach.*

About the chef who dropped the egg? Never mind – *it cracks me up.*

Follow the Arrows #1 (page 29)

A 18,931 ➤4,458 ➤2,229 ➤11,145 ➤4,210 ➤842

B 24,244 ➤451 ➤17,589 ➤5,214 ➤869 ➤46,926 ➤5,551

Links (page 30)

N 80	D 1,098	L 44	G 847	Y 231
A 77	S 36	B 1,060	U 183	O 105

What strange children live in the ocean? *Buoys and gulls*

Shapely Math #1 (page 31)

1. (48 × ◁44) ÷ (◇68 − 63) = **422 r 2**

2. (22 × 75) ÷ (68 − 22) = **35 r 40**

3. (63 × 84) ÷ (39 − 35) = **1,323**

4. (48 × 24) ÷ (97 − 91) = **192**

5. (32 × 74) ÷ (63 − 57) = **394 r 4**

6. (39 × 91) ÷ (91 − 84) = **507**

Elephant Trivia (page 32)

J 84	I 113	K 81	A 112
L 85	T 91	E 90	R 149
O 104	S 165	N 64	
D 72	W 159	H 50	

Why did the elephant cross the road? *He didn't want to hear that last joke.*

Riddle Time (page 33)

T 48	K 7
G 34	C 31
E 36	H 9
A 6	N 40
F 68	S 8
W 5	P 25
I 33	O 26

What has 500 teeth and says "Beware of Dog"? *A picket fence with a sign on it*

Equal Values (page 34)

$\frac{5}{3}=1\frac{2}{3}$	$\frac{14}{10}=1\frac{4}{10}=1\frac{2}{5}$	$\frac{9}{6}=1\frac{3}{6}=1\frac{1}{2}$	$\frac{8}{5}=1\frac{3}{5}$
$\frac{13}{8}=1\frac{5}{8}$	$\frac{17}{14}=1\frac{3}{14}$	$\frac{7}{4}=1\frac{3}{4}$	$\frac{17}{12}=1\frac{5}{12}$
$\frac{12}{7}=1\frac{5}{7}$	$\frac{10}{8}=1\frac{2}{8}=1\frac{1}{4}$	$\frac{9}{4}=2\frac{1}{4}$	$\frac{11}{6}=1\frac{5}{6}$
$\frac{9}{7}=1\frac{2}{7}$	$\frac{5}{2}=2\frac{1}{2}$	$\frac{12}{9}=1\frac{3}{9}=1\frac{1}{3}$	$\frac{13}{12}=1\frac{1}{12}$

What is the difference between a football player and a duck? *A football player is found in a huddle, but a duck is found in a puddle.*

A Sharp Riddle (page 35)

D $1\frac{1}{6}$	E $\frac{1}{3}$	F $\frac{7}{20}$	S $\frac{1}{2}$
T $\frac{3}{10}$	O $2\frac{1}{6}$	R $1\frac{7}{24}$	Y $\frac{7}{30}$
I $\frac{5}{6}$	H $\frac{1}{4}$	L $1\frac{1}{3}$	C $\frac{11}{24}$
U $\frac{2}{15}$	K $1\frac{5}{12}$	W $\frac{4}{21}$	N $\frac{13}{14}$

If two vampires had a race, who would win? *Neither—they would finish neck-in-neck.*

Wrestle the Code (page 36)

E	$\frac{1}{2}$	A	$\frac{3}{4}$
D	$\frac{1}{3}$	R	$2\frac{1}{3}$
T	$\frac{2}{3}$	O	$\frac{1}{6}$
S	$1\frac{1}{5}$	W	$2\frac{1}{4}$
Y	1	N	$1\frac{1}{3}$
I	$1\frac{1}{2}$	L	3
H	$1\frac{2}{3}$	F	$\frac{6}{7}$
		G	$\frac{5}{9}$

What did the wrestler say when he sat down to eat at the buffet? *I really don't want all this food to go to waist.*

Decimal Match (page 37)

1. 0.3	**2.** 13.001	**3.** 4.04	**4.** 7.015
5. 13.01	**6.** 4.004	**7.** 0.03	**8.** 13.1
9. 4.040	**10.** 13.10	**11.** 4.4	**12.** 7.15

How do we know football referees are happy? *We know referees are happy because they always whistle while they work.*

Follow the Arrows #2 (page 38)

A 158.511 ➤64.435 ➤4.7 ➤11.75 ➤2.35 ➤9.4

B 595.765 ➤4.445 ➤26.67 ➤7.65 ➤1.53 ➤10.098 ➤0.099

Coded Riddle (page 39)

F	11.02	L	78.3	B	350.4
S	127.02	H	439.35	R	33.06
E	316.91	Y	3,754.4	I	245.05
P	3,920.4	D	315.27	W	3,729.6
N	1,660.6	U	4,720.8	O	152.32
T	3,096.6				

Why did the doughnut makers finally close their shop? *They were fed up with the hole business.*

Decimal Fun (page 40)

R	28.469	T	1,209.55	N	145.01
S	9.232	C	50.035	D	17.333
H	231.7	I	207.35	E	71
G	396				

Why did the hen always lift eggs? *She needed the eggs-ercise.*

1. (4.3 - |4.01|) + (|35.4| - 5.2) = **30.49**

2. (.072 - .007) + (8.3 - 6.7) = **1.665**

3. (99.1 - 66) + (6.38 - 6.01) = **33.47**

4. (99.1 - 84.1) + (7.7 - 6.7) = **16**

5. (948 - .007) + (6.34 - .407) = **953.926**

6. (24.9 - 4.3) + (84.1 - 35.4) = **69.3**

Shapely Math #2 (page 41)

No Kidding! (page 42)

C	1.8	S	5	M	4.3	E	0.61
R	0.2	A	9.5	H	0.32	L	0.7
I	0.3	Y	0.39	B	0.4	O	0.04
U	0.8	T	8				

What's the tallest building in town? *The library, because it has the most stories.*

Hidden Question and Answer #1 (page 43)

Y	(0,2)	A	(2,0)	I	(5,4)
B	(8,0)	N	(11,8)	R	(1,8)
S	(4,8)	H	(6,7)	E	(9,6)
D	(1,5)	O	(4,6)	M	(7,5)
L	(10,5)	W	(2,2)	K	(4,3)
G	(8,3)	T	(10,1)		

Question: *What did the egg say to the blender?*

Answer: *I know when I'm beaten.*

Hidden Question and Answer #2 (page 44)

Y	(0,7)	R	(2,5)	A	(4,1)
T	(7,3)	U	(9,2)	S	(0,1)
E	(3,8)	B	(5,4)	O	(8,7)
N	(10,4)	H	(1,3)	D	(3,4)
L	(6,9)	V	(8,0)	I	(1,0)
F	(4,6)	C	(6,5)	W	(9,8)

Question: *What is the best cure for double vision?*

Answer: *Shut one eye.*

A Timely Puzzle (page 45)

1. 720 minutes	**2.** 7:01 A.M.
3. 3 minutes, 6 seconds	**4.** 7:34 A.M.
5. 1,140 seconds	**6.** 13 hours, 3 minutes
7. 132 minutes	**8.** 2 hours, 40 minutes
9. 3 minute, 1 second	**10.** 900 seconds
11. 2 hours, 5 minutes	**12.** 756 seconds

Why did the downhill skier wear just one boot? *He heard that the snow along the trail was one foot deep.*