

Answer Key for Saxon 65 Second edition isbn 1-56577- 036-6

*Any problem that states Draw.... has DRAW on this answer key. I have another document for these. It can be found here https://drive.google.com/file/d/1VAluFDveRSY4u_YEN1asajDvVy2IARAs/view?usp=drivesdk

** All lessons in TEXT book with a * after practice like this: "Practice*" are lessons with Supplemental practice sets in the appendix.

**If you find an error in my calculations/inputs, please let me know and I will make the necessary corrections.

Please also let me know if I have put an answer in the incorrect format (used decimal instead of a fraction, etc)

**** Spreadsheets apparently don't like fractions. This book is heavy on fractions. I realized around lesson 100-110 that it was simplifying (automatic) them weird. For example, it would simplify $\frac{3}{10}$ to $\frac{2}{7}$ which isn't correct. I tried to go back and find them all, but until everything is double checked there may be fractions that are reduced wrong.

expanded form - $352 = 300 + 50 + 2$

expanded notation - $352 = (3 \times 100) + (5 \times 10) + (2 \times 1)$

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lesson	# in practice set	# of Problem Set	Description	pg	possible 54 corresponding lesson
1	12	25	Counting Sequences - Identifying Digits	1	3
2	6	25	Identifying Even and Odd Numbers	4	11
3	5	25	Using Money to Illustrate Place Value	8	5
4	7	25	Comparing Whole Numbers	12	15
5	6	25	Naming Whole Numbers Through Hundreds - Dollars and Cents	16	8,9
	20	Supplemental	Supplemental		n/a
6	13	25	Adding One-Digit Numbers - Practicing the Addition Algorithm	19	1
	20	Supplemental	Supplemental		n/a
7	7	25	Place Value - Writing Numbers Through Hundred Thousands	24	5
	20	Supplemental	Supplemental		n/a
8	8	25	Subtraction Facts - Fact Families	29	18
9	9	25	Practicing the Subtraction Algorithm	32	37
	15	Supplemental	Supplemental		n/a
10	4	25	Missing Numbers in Addition	37	2
11	2	25	"Some and Some More" Stories	40	12
12	5	25	Reading and Drawing Number Lines, Part 1 - Tally Marks	45	13
13	5	25	Multiplication to Preform Repeated Addition - Adding and Subtracting Dollars and Cents	49	33
	20	Supplemental	Supplemental		n/a
14	8	25	Missing Numbers in Subtraction	53	14
15	9	24	Making a Multiplication Table	58	34
16	9	25	Horizontal, Vertical, and Oblique - "Some Went Away" Stories	61	31
17	9	25	Multiplying by One-Digit Numbers	66	36
	16	Supplemental	Supplemental		n/a
18	8	25	Multiplying Three Factors - Missing Numbers in Multiplication	70	72
	20	Supplemental	Supplemental		n/a
19	9	25	Learning Division Facts	74	56
20	12	25	Three Ways to Show Division	77	57
21	8	25	"Equal Groups" Stories	80	59
22	9	25	Dividing and Writing a Remainder	84	63
	18	Supplemental	Supplemental		n/a
23	7	25	Halves, Fourths, Tenths	87	28
24	9	25	Dollars - Parentheses	91	55
	20	Supplemental	Supplemental		n/a
25	12	25	Listing the Factors of Whole Numbers	94	
26	8	25	Practicing the Division Algorithm	97	74
	21	Supplemental	Supplemental		n/a
27	5	25	Solving Problems about Division of Time	101	64
28	1	25	Reading and Drawing Number Lines, Part 2	104	22
29	7	25	Reading and Writing Time from a Clock	108	23
	20	Supplemental	Supplemental		n/a
30	12	25	Multiplying by Multiples of 10 and 100	112	77
	20	Supplemental	Supplemental		n/a
31	9	25	Picturing Fractions, Part 1 - Cents and Percents	116	32
32	3	25	Drawing Pairs of Lines: Parallel, Intersecting, Perpendicular	120	29
33	6	25	Drawing Angles	123	29
34	8	25	Rounding Numbers Using a Number Line	126	52
	24	Supplemental	Supplemental		n/a
35	12	25	Division with Zeros in the Quotient	130	81

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lesson	# in practice set	# of Problem Set	Description	pg	possible 54 corresponding lesson
	18	Supplemental	Supplemental		n/a
36	3	25	"Larger-Smaller-Difference" Stories	133	38
37	0	25	Using Fraction Manipulatives, Part 1	137	
38	5	25	Drawing Segments to Close in an Area	141	
39	8	25	Polygons	145	73
40	4	25	Picturing Fractions, Part 2	149	
	20	Supplemental	Supplemental		n/a
41	8	25	Half of an Odd Number - Fractions on a Number Line	152	
	25	Supplemental	Supplemental		n/a
42	4	25	Comparing Fractions by Drawing Pictures	157	66
43	5	25	Pictures of Mixed Numbers - Dividing Remainders, Part 1	160	44
44	4	25	Adding and Subtracting Fractions with Common Denominators	165	132
45	9	25	Short Division	170	
46	0	25	Using Fraction Manipulatives, Part 2	173	
47	8	25	Dividing Remainders, Part 2 - Adding and Subtracting Whole Numbers, Fractions, and Mixed Numbers	177	
	20	Supplemental	Supplemental		n/a
48	5	25	Reading Lengths on a Metric Scale	182	27
49	6	25	Reading an Inch Ruler to the Nearest Fourth of an Inch	185	48
50	2	25	Illustrating Fraction Stories	189	80
51	4	25	Practicing the Directions of the Compass	193	
52	4	25	Simplifying Mixed Measures	197	
53	7	25	Reading and Writing Whole Numbers in Expanded Notation	201	20
	20	Supplemental	Supplemental		n/a
54	0	25	Finding Information to Solve Problems	204	92
55	2	25	Solving Two-Step Word Problems	208	69
56	3	25	Making Equal Groups to Find an Average	212	97
57	6	25	Multiplying by Two-Digit Numbers	216	
	20	Supplemental	Supplemental		n/a
58	7	25	Identifying Numbers Through Hundred-Millions'	220	137
	20	Supplemental	Supplemental		n/a
59	5	25	Naming Numbers Through Hundred Millions	223	
	20	Supplemental	Supplemental		n/a
60	8	25	Calculating the Perimeter of Polygons - Identifying the Measures of Circles	227	60,110
61	6	25	Dividing by Multiples of 10	231	115
	18	Supplemental	Supplemental		n/a
62	4	25	Multiplying by Three-Digit Numbers, Part 1	234	
63	8	25	Multiplying by Three-Digit Numbers, Part 2	237	
	20	Supplemental	Supplemental		n/a
64	12	25	Learning the Terms Divisor, Dividend and Quotient	241	
65	9	25	Dividing and Writing Quotients with Fractions	245	
	21	Supplemental	Supplemental		n/a
66	8	25	Fractions Equal to 1 - Subtracting a Fraction from 1	248	
67	3	25	Finding a Fraction to Complete a Whole	252	
68	2	25	Recongizing Halves	255	
69	10	25	Estimating Arithmetic Answers	258	70
	20	Supplemental	Supplemental		n/a
70	6	25	Subtracting a Fraction from a Whole Number Greater Than 1	261	
	20	Supplemental	Supplemental		n/a

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lesson	# in practice set	# of Problem Set	Description	pg	possible 54 corresponding lesson
71	6	25	Decimal Place Value Through Hundredths'	265	
72	11	25	Writing Tenths in Decimal Form	269	101
73	9	25	Naming Points on a Number Line with Decimal Numbers - Naming Line Segments	273	
74	6	25	Reading a Centimeter Scale to the Nearest Tenth	277	
75	3	25	Writing Hundredths in Decimal Form	281	102
76	6	25	Naming Fractional Parts with Decimal Fractions - Hundredths	285	
77	8	25	Identifying Decimal Place Value Through Hundredths	289	
	20	Supplemental	Supplemental		n/a
78	3	25	Fractions of a Second - Comparing Decimal Numbers	293	
79	7	25	Counting Decimal Places - Writing Equivalent Decimal Numbers	297	
80	10	25	Writing Money in Two Forms: As Cents and as Dollars	301	45
81	1	25	Using Fraction Manipulatives, Part 3	305	
82	6	25	Adding and Subtracting Decimal Numbers, Part 1	309	116,117
83	4	25	Converting Units of Length	312	49
84	12	25	Changing Improper Fractions to Whole or Mixed Numbers	316	
85	12	25	Changing Improper Mixed Numbers to Whole or Mixed Numbers	320	
	21	Supplemental	Supplemental		n/a
86	8	25	Multiplying Fractions	324	
	20	Supplemental	Supplemental		n/a
87	4	25	Converting Units of Weight and Mass	328	87
88	5	25	Identifying Equivalent Fractions	332	123
89	7	25	Finding Equivalent Fractions by Multiplying by 1	336	128
	20	Supplemental	Supplemental		n/a
90	5	25	Identifying Prime Numbers	340	
91	5	25	Finding Equivalent Fractions by Dividing by 1	344	
	18	Supplemental	Supplemental		n/a
92	9	25	Finding the Greatest Common Factor (GCF) of Two Numbers	348	
93	4	25	Recognizing and Naming Geometric Solids	352	134
94	5	23	Using Letters to Name Angles	356	
95	4	25	Converting Units of Liquid Measure	360	83
96	6	25	Multiplying Fractions and Whole Numbers	364	
	21	Supplemental	Supplemental		n/a
97	6	25	Dividing Fractions, Part 1	368	
98	3	25	Reducing Fractions Answers	373	
99	12	25	Reducing Mixed Numbers	377	
	20	Supplemental	Supplemental		n/a
100	9	25	Reducing Fractions to Lowest Terms	381	125
	21	Supplemental	Supplemental		n/a
101	11	25	Converting and Reducing Improper Fractions	385	
	19	Supplemental	Supplemental		n/a
102	7	25	Dividing by Two-Digit Numbers, Part 1	389	130
103	9	25	Dividing by Two-Digit Numbers, Part 2	392	
104	9	25	Dividing by Two-Digit Numbers, Part 3	396	
	18	Supplemental	Supplemental		n/a
105	12	25	Writing the Reciprocal of a Fraction	400	
106	9	25	Dividing Fractions, Part 2	404	
	18	Supplemental	Supplemental		n/a
107	1	25	Ratios	408	

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lesson	# in practice set	# of Problem Set	Description	pg	possible 54 corresponding lesson
108	10	25	Adding and Subtracting Decimal Numbers, Part 2	411	
109	8	25	Adding Whole Numbers and Decimal Numbers	415	
	20	Supplemental	Supplemental		n/a
110	7	25	Simplifying Decimal Numbers	418	
111	8	25	Rounding Mixed Numbers to the Nearest Whole Number	421	
112	10	25	Subtracting: Fill Empty Places with Zero	424	
	20	Supplemental	Supplemental		n/a
113	10	25	Subtracting: Pin Decimal Point on Whole Number	427	
	20	Supplemental	Supplemental		n/a
114	7	25	Rounding Dollars and Cents to the Nearest Dollar	430	
115	7	25	Rounding Decimal Numbers to the Nearest Whole Number	434	
	18	Supplemental	Supplemental		n/a
116	5	25	Decimal Place Value: Thousandths	438	
117	6	25	Using Percent to Name Part of a Group	442	
118	4	25	Writing a Percent as a Fraction	446	
	16	Supplemental	Supplemental		n/a
119	8	25	Multiplying Decimal Numbers	449	
	20	Supplemental	Supplemental		n/a
120	10	25	Multiplying Decimal Numbers: Fill Empty Places with Zero	453	
	20	Supplemental	Supplemental		n/a
121	9	25	Multiplying Decimal Numbers by 10, 100, and 1000	456	
122	7	25	Finding the Least Common Multiple of Two Numbers	460	
	20	Supplemental	Supplemental		n/a
123	4	25	Writing Mixed Numbers as Improper Fractions	464	
	16	Supplemental	Supplemental		n/a
124	6	25	Naming a Simple Probability	468	
125	4	25	Calculating Area of Rectangles	472	76
126	5	25	Probability and Chance	476	129
127	8	25	Adding and Subtracting Fractions, Part 2	480	139
	15	Supplemental	Supplemental		n/a
128	8	25	Adding and Subtracting Mixed Numbers, Part 2	483	
	20	Supplemental	Supplemental		n/a
129	9	25	Dividing a Decimal Number by a Whole Number	486	
	20	Supplemental	Supplemental		n/a
130	8	25	Dividing Decimal Numbers: Fill Empty Places with Zero	490	
	20	Supplemental	Supplemental		n/a
131	9	25	Dividing Decimal Numbers: Keep Dividing	493	
	20	Supplemental	Supplemental		n/a
132	12	25	Dividing Decimal Numbers by 10, 100, and 1000	496	
133	4	25	Finding the Average of Two or More Numbers	499	106
	20	Supplemental	Supplemental		n/a
134	9	25	Adding and Subtracting Fractions, Part 3	503	
	18	Supplemental	Supplemental		n/a
135	8	25	Adding and Subtracting Mixed Numbers, Part 3	507	
	20	Supplemental	Supplemental		n/a
136	9	25	Dividing by a Decimal Number	509	
	20	Supplemental	Supplemental		n/a
137	6	25	Multiplying Mixed Numbers	513	

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lesson	# in practice set	# of Problem Set	Description	pg	possible 54 corresponding lesson
	18	Supplemental	Supplemental		n/a
138	4	25	Locating Points on a Coordinate Graph, Part 1	516	
139	6	25	Recognizing Negative Numbers	519	
140	5	25	Locating Points on a Coordinate Graph, Part 2	522	
		968	Total practice		
		3497	Total problem set		
		1073	Total Supplemental		
		4465	Total practice and problem set		
		5538	Total all		
		560	Total from tests		
		#REF!	Total from text book and tests		

1 Counting Sequences - Identifying Digits							
Mental Math				Problem set			
	10, 20, 30, 40, 50, 60, 70, 80, 90, 100				1 25	5s	
					2 35	7s	
	100, 200, 300, 400, 500, 600, 700, 800, 900, 1000				3 32	8s	
					4 54	9s	
					5 15	3s	
					6 16	4s	
A.	6				7 21	7s	
B.	60				8 35	5s	
C.	600				9 24	4s	
D.	90				10 40	8s	
E.	800				11 42	6s	
F.	100				12 35	7s	
G.	60				13 15	18	21
H.	1500				14 32	40	48
					15 24	30	36
Problem Solving					16 25	20	15
	9				17 27	30	33
					18 36	45	54
Practice					19 sequence		
A.	12	14	16		20 6		
B.	28	35	42		21 5		
C.	16	20	24		22 8		
D.	12	9	6		23 8		
E.	30	25	20		24 7		
F.	30	36	42		25 0		
G.	5						
H.	4						
I.	7						
J.	7						
K.	6						percent through book
L.	1						0.71

2 Identifying Even and Odd Numbers							
Mental Math				Problem set			
	see lesson 1... , 100,90,80,70,60,50,40,30,20,10			1	odd		
				2	0		
	see lesson 1... , 1000,900,800,700,600,500,400,300, 200,100			3	7		
				4	odd		
				5	even		
				6	odd		
A.	12			7	3716		
B.	120			8	56,789		
C.	1200			9	33,456		
D.	130			10	323		
E.	150			11	18	21	24
F.	900			12	40	48	56
G.	180			13	90	80	70
H.	200			14	16	12	8
				15	40	35	30
Problem Solving				16	45	54	63
	90			17	27	24	21
	99 - 9 one digit			18	36	42	48
				19	35	42	49
				20	48	42	36
				21	36	32	28
				22	72	63	54
				23	64	56	48
				24	63	56	49
Practice				25	31		
A.	even						
B.	even						
C.	odd						
D.	odd						
E.	even						percent through book
F.	even						1.43

3 Using Money to Illustrate Place Value							
Mental Math				Problem set			
	see lesson 1... 110, 120, 130, 140, 150, 160, 170, 180, 190, 200			1	578	500+70+8	
	see lesson 1... 1100, 1200, 1300, 1400, 1500, 1600, 1700, 1800, 1900, 2000			2	250	200+50+0	
				3	6		
				4	5		
				5	hundred		
				6	C 536		
A.	100			7	B 2345		
B.	320			8	98		
C.	340			9	B 25		
D.	540			10	C 5s		
E.	290			11	18	21	24
F.	650			12	36	30	24
G.	180			13	32	40	48
H.	720			14	56	48	40
				15	28	32	36
Problem Solving				16	28	24	20
	900			17	54	63	72
	999-90 two digit -9 one digit			18	54	45	36
				19	40	50	60
				20	24	21	18
				21	40		
				22	500		
				23	334	200+120+14	
				24	hundreds		
				25	36		
Practice							
A.	1 hundred + 2 tens	120					
B.	1 hundreds + 3 tens + 2 ones	12+120	132				
C.	6						
D.	350	300+50				percent through book	
E.	215	100+100+15				2.14	

4 Comparing Whole Numbers								
Mental Math					Problem set			
	see lesson 3 add 0 on beginning				1	4	<	10
	see lesson 3 add 0 on beginning				2	15	>	12
					3	<		
A.	640				4	<		
B.	300				5	365		
C.	650				6	6		
D.	640				7	3		
E.	700				8	tens		
F.	310				9	odd		
G.	940				10	even		
H.	560				11	even		
					12	999		
Problem Solving					13	B 4s		
	123	132			14	354	435	543
	231	213			15	54		
	312	321			16	640	500+130+10	
					17	32	36	40
					18	100	98	96
					19	18	24	30
					20	21	28	35
					21	16	8	0
					22	18	9	0
					23	90		
Practice					24	110		
A.	20	<	30		25	56		
B.	12	>	8					
C.	243	324	423					
D.	<							
E.	>							
F.	=							percent through book
G.	<							2.86

5 Naming Whole Numbers Through Hundreds - Dollars and Cents

Mental Math

Problem set

see lesson 4, also go backwards

1 \$374.20

see lesson 4, also go backwards

2 six hundred twenty-three dollars and fifteen cents

A. 560

3 205

B. 650

4 one hundred nine

C. 770

5 150 > 115

D. 500

6 <

E. 760

7 579

F. 460

8 246 426 462 624

G. 890

9 6

H. 520

10 100

11 even

12 odd

Problem Solving

13 even

234 243

14 998

342 324

15 B 3s

423 432

16 B 29

17 702 $600+90+12$

18 27 36 45 54

19 40 45 50 55

20 24 30 36 42

21 70 60 50 40

22 63 54 45 36

Practice

23 64 56 48 40

A. five hundred sixty-three dollars and forty-five cents

24 28 35 42 49

25 27

B. one hundred and one

C. one hundred eleven

D. 245

E. 420

percent through book

F. \$503.50

3.57

6 Adding One-Digit Numbers - Practicing the Addition Algorithm

Mental Math

0, 20, 40, 60, 80, 100, 120, 140,
160, 180, 200

0, 200, 400, 600, 800, 1000, 1200,
1400, 1600, 1800, 2000

- | | |
|--------|--------|
| A. 790 | B. 620 |
| C. 350 | D. 650 |
| E. 680 | F. 940 |
| G. 290 | H. 900 |

Problem set

- 1 606
- 2 two hundred twelve dollars and fifty cents
- 3 2
- 4 even
- 5 odd
- 6 odd
- 7 \$508
- 8 five hundred eighty

9 16

10 17

Problem Solving

345 354

435 453

534 543

11 19

12 22

13 963

14 1000

15 1042

16 927

Practice

A. 16

B. 20

C. 19

D. 22

E. 14

F. 16

G. 18

H. 23

I. 621

J. 1229

K. 830

L. 641

M. 532

17 A 25

18 80

19 48

20 56

21 64

22 916 < 960

23 690 > 609

24 15 = 15

25 11

percent through book

8 Subtraction Facts - Fact Families									
Mental Math					Problem set				
0, 50, 100, 150, 200, 250, 300, 350, 400, 450, 500					1	3			
					2	1,3,5,7,9			
0, 500, 1000, 1500, 2000, 2500, 3000, 3500, 4000, 4500, 5000					3	8			
					4	616			
A.	6000				5	3			
B.	10,000				6	270			
C.	800				7	eight hundred twelve thousand			
D.	950				8	802			
E.	300				9	65			
F.	850				10	four hundred forty-four			
G.	1500				11	54			
H.	1000				12	27			
					13	4+8=12	8+4=12	12-4=8	12-8=4
Problem Solving					14	even			
	246		double		15	9			
	264				16	8			
	426				17	7			
	462				18	3			
	624				19	8			
	642				20	4			
	<hr/> 2664				21	536			
					22	996			
Practice					23	252			
A.	8				24	971			
B.	4				25	651	287+364		
C.	6								
D.	6								
E.	9								
F.	8								
G.	7+8=15	8+7=15	15-7=8	15-8=7					percent through book
H.	5+7=12	7+5=12	12-7=5	12-5=7					5.71

9 Practicing the Subtraction Algorithm									
Mental Math					Problem set				
	see lesson 8, also go backwards				1	475			
	see lesson 8, also go backwards				2	0,2,4,6,8			
					3	9			
A.	500				4	10			
B.	12000				5	8			
C.	200				6	7+8=15	8+7=15	15-7=8	15-8=7
D.	1500				7	309			
E.	40				8	540	>	514	
F.	400				9	60+16=76			
G.	4000				10	123			
H.	930				11	168			
					12	18			
Problem Solving					13	146			
	PTA	PAT			14	279			
	TAP	TPA			15	176			
	APT	ATP			16	254			
					17	294			
					18	37			
					19	1267			
					20	1101			
					21	1199			
Practice					22	1185			
A.	339				23	63			
B.	264				24	81			
C.	51				25	72			
D.	437								
E.	359								
F.	394								
G.	38								
H.	92								percent through book
I.	156								6.43

10 Missing Numbers in Addition								
Mental Math				Problem set				
0, 25, 50, 75, 100, 125, 150, 175, 200, 175, 150, 125, 100, 75, 50, 25, 0				1	666			
				2	5+6=9	6+5=9	9-5=6	9-6=5
				3	645			
0, 20, 40, 60, 80, 100, 120, 140, 160, 180, 200, 180, 160, 140, 120, 100, 80, 60, 40, 20, 0				4	613	<	630	
				5	27			
				6	459			
				7	9			
				8	B 4s			
A.	9500			9	odd			
B.	2000			10	90	>	80	
C.	1000			11	184			
D.	470			12	224			
E.	100			13	479			
F.	250			14	329			
G.	900			15	550			
H.	15			16	864			
				17	1927			
Problem Solving				18	445			
	ETA	EAT		19	378			
	TAE	TEA		20	1094			
	AET	ATE		21	24			
				22	68			
				23	15,18,21,24			
				24	20,24,28,32			
				25	30,36,42,48			
Practice								
A.	32							
B.	13							
C.	9							percent through book
D.	20							7.14

11 "Some and Some More" Stories									
Mental Math					Problem set				
	see lesson 10				1	8			
	0, 250, 500, 750, 1000, 1250, 1500, 1750, 2000, 1750, 1500, 1250, 1000, 750, 500, 250, 0				2	23			
					3	803			
					4	$8+9=17$	$9+8=17$	$17-8=9$	$17-9=8$
					5	312			
					6	21	=	21	
A.	9200			7	820	>	812		
B.	2000			8	$40-14=26$				
C.	500			9	even				
D.	820			10	\$408.70				
E.	50			11	816				
F.	400			12	572				
G.	14			13	661				
H.	24			14	80				
				15	22				
Problem Solving					16	1541			
	answers may vary				17	1375			
	3 different letters that can be arranged to spell at least 2 different words.				18	784			
					19	259			
					20	8			
					21	8			
					22	55			
				23	45	54	63	72	
				24	40	48	56	64	
				25	35	42	49	56	
Practice									
A.	17							percent through book	
B.	14							7.86	

12 Reading and Drawing Number Lines, Part 1 - Tally Marks						
Mental Math			Problem set			
see lesson 10... , 225, 250, 275, 300			1	5		
			2	Draw		
0, 50, 100, 150, 200, 250, 300, 350, 400, 450, 500, 450, 400, 350, 300, 250, 200, 150, 100, 50, 0			3	180		
			4	24		
			5	783		
			6	283		
			7	412		
A.	7000		8	364		
B.	500		9	780		
C.	150		10	1605		
D.	1500		11	1532		
E.	60		12	141		
F.	200		13	10		
G.	45		14	486		
H.	11		15	B 50 and 60		
			16	18 < 80		
Problem Solving			17	4+6=10	6+4=10	10-4=6 10-6=4
Larry, Moe, Joe			18	odd		
Larry, Joe, Moe			19	132		
Moe, Joe, Larry			20	39		
Moe, Larry, Joe			21	>		
Joe, Larry, Moe			22	8	10	12 14 16 18
Joe, Moe, Larry			23	12	15	18 21 24 27
			24	16	20	24 28 32 36
			25	20	25	30 35 40 45
Practice						
A.	A	B is line, C is point				
B.	Draw					
C.	4					
D.	8					percent through book
E.	13					8.57

13 Multiplying to Perform Repeated Addition -							
Adding and Subtracting Dollars and Cents							
Mental Math			Problem set				
	.25, .50, .75,		1	Draw	4		
	1.00, 1.25,		2	Draw			
	1.50, 1.75,		3	19			
	2.00, 2.25,		4	7x6			
	2.50, 2.75,		5	3+7=10	7+3=10	10-3=7	10-7=3
	3.00		6	125			
	3.00, 2.75,		7	186			
	2.50, 2.25,		8	2.76			
	2.00, 1.75,		9	116			
	1.50, 1.25,		10	389			
	1.00, .75, .		11	251			
	50, .25		12	8.65			
A.	6000		13	1757			
B.	1900		14	1001			
C.	450		15	15-5=10			
D.	1500		16	odd			
E.	160		17	18.32			
F.	300		18	5078			
G.	75		19	3			
H.	18		20	2078			
Problem Solving			21	12	=	12	
	6,6,9		22	24	30	36	42 48 54
	<u>3</u> 64+2 <u>3</u> 9= <u>6</u> 03		23	28	35	42	49 56 63
			24	32	40	48	56 64 72
Practice			25	36	45	54	63 72 81
A.	8x4						
B.	25x3						
C.	9x6						
D.	14.18						percent through book
E.	0.62						9.29

14 Missing Numbers in Subtraction								
Mental Math				Problem set				
see lesson 13				1	Draw	4		
0.50, 1.00, 1.50,				2	four dollars and forty-eight cents			
2.00, 2.50, 3.00,				3	818,080			
3.50, 4.00, 4.50,				4	Draw			
5.00, 4.50, 4.00,				5	175			
3.50, 3.00, 2.50,				6	10x4			
2.00, 1.50, 1.00,				7	56	<	65	
0.50				8	312			
A.	3000			9	41.56			
B.	2000			10	1.98			
C.	840			11	236			
D.	10			12	3238			
E.	20			13	12.8			
F.	0.5	0.75	1.00	14	1096			
				15	776			
Problem Solving				16	198			
1,4,2,8				17	52			
528+494=1022				18	18			
				19	37			
				20	4229			
				21	32+18=50			
				22	56			
Practice				23	2+8=10	8+2=10	10-2=8	10-8=2
A.	22+12=34			24	29			
B.	27+29=56			25	300			
C.	14							
D.	6							
E.	72							
F.	43							
G.	50				percent through book			
H.	18				10.00			

15 Making a Multiplication Table									
Mental Math				Problem set					
	0, 50, 100, 150, 200, 250, 300, 350, 400, 450, 500			1	Draw	5			
				2	8				
	500, 450, 400, 350, 300, 250, 200, 150, 100, 50, 0			3	Draw				
				4	1+9=10	9+1=10	10-1=9	10-9=1	
				5	\$880.08				
A.	150			6	18				
B.	1500			7	18				
C.	50			8	32				
D.	500			9	63				
E.	280			10	90				
F.	45			11	919				
G.	550			12	0.57				
H.	3.25			13	245				
I.	0.75	1.25	1.5	14	254				
J.	30			15	1647				
				16	336				
Problem Solving				17	2300				
	Billy, Ron, Sherry			18	10.48				
	Billy, Sherry, Ron			19	111				
	Ron, Sherry, Billy			20	32.14				
	Ron, Billy, Sherry			21	132				
	Sherry, Billy, Ron			22	15	=	15		
	Sherry, Ron, Billy			23	12=10+2				
				24	56				
				25	no question				
Practice									
A.	20		F.	72					
B.	12		G.	32					
C.	18		H.	30					
D.	80		I.	factors					percent through book
E.	42								10.71

16 Horizontal, Vertical, and Oblique - "Some Went Away" Stories							
Mental Math				Problem set			
A.	15			1	6		
B.	150			2	Draw		
C.	1500			3	two hundred five dollars and fifty cents		
D.	30			4	$6+8=14$	$8+6=14$	$14-6=8$ $14-8=6$
E.	300			5	vertical		
F.	3000			6	76		
G.	1.25			7	16		
H.	156			8	21		
I.	42			9	42		
J.	44			10	24		
				11	70		
				12	312		
				13	810		
				14	1.3		
				15	128		
Problem Solving				16	1433		
	answers may vary			17	157		
	<u>69</u> + <u>379</u> = <u>248</u>			18	965		
				19	8		
				20	odd		
				21	C		
Practice				22	840	>	814
A.	oblique			23	42		
B.	vertical			24	12	=	12
C.	horizontal			25	27		
D.	oblique						
E.	Draw						
F.	Draw						
G.	Draw						
H.	411						percent through book
I.	207						11.43

17 Multiplying by One-Digit Numbers								
Mental Math				Problem set				
1, 6, 11, 16, 21, 26, 31, 36, 41, 46, 51, 46, 41, 36, 31, 26, 21, 16, 11, 6, 1				1	Draw			
				2	13			
				3	360	360		
.5, 1.00, 1.50, 2.00, 2.50, 3.00, 3.50, 4.00, 4.50, 5.00, 4.50, 4.00, 3.50, 3.00, 2.50, 2.00, 1.50, 1.00, . 5				4	4.1			
				5	72			
				6	144			
				7	225			
				8	336			
A.	24	B.	240	C.	2400	9	19.5	
D.	40	E.	400	F.	4000	10	3888	
G.	92	H.	184	I.	520	11	17.22	
J.	49					12	2912	
				13	169			
				14	0.45			
Problem Solving				15	198			
	quarters	10		16	873			
	dimes	5		17	33			
	2	rolls of dimes to equal one roll of quarters		18	104.73			
				19	184			
				20	182			
				21	even			
Practice				22	60	=	60	
A.	180			23	504	<	514	
B.	400			24	42			
C.	3.01			25	3			
D.	2720							
E.	30.72							
F.	3036							
G.	2758							
H.	5463						percent through book	
I.	29.04						12.14	

18 Multiplying Three Factors - Missing Numbers in Multiplication							
Mental Math				Problem set			
see lesson 17				1 Draw			
0, 200, 400, 600, 800, 1000, 1200, 1400, 1600, 1800, 2000, 1800, 1400, 1200, 1000, 800, 600, 400, 200, 0				2 Draw			
				3 19			
				4 31			
				5 120			
				6 360			
				7 300			
A. 96				8 630			
B. 92				9 3256			
C. 170				10 2250			
D. 4200				11 43.74			
E. 900				12 2156			
F. 352				13 4			
G. 2.50				14 5157			
H. 33				15 6			
				16 30.72			
Problem Solving				17 370			
		367		3__		18 241	
		+ 452		+ 452		19 28.77	
		819		---		20 400	
				use 1,6,7,8,9		21 222	
				22 even			
Practice				23 3			
A. 210				24 $8 \times 8 > 9 \times 7$		$64 > 63$	
B. 720				25 $7 + 8 = 15$		$8 + 7 = 15$	
C. 300						$15 - 7 = 8$	
D. 0						$15 - 8 = 7$	
E. 6							
F. 7							
G. 6							
H. 9							
						percent through book	
						12.86	

19 Learning Division Facts								
Mental Math				Problem set				
2, 7, 12, 17, 22, 27, 32, 37, 42, 47, 52, 47, 42, 37, 32, 27, 22, 17, 12, 7, 2				1	16			
				2	1338			
				3	30			
				4	four thousand, five hundred eighty-seven dollars and twenty			
A.	60	B.	90	5	$7 \times 8 = 56$	$8 \times 7 = 56$	$56/7 = 8$	$56/7 = 8$
C.	192	D.	260	6	8			
E.	200	F.	664	7	3			
G.	4.50	H.	100	8	8			
				9	4			
				10	33.81			
Problem Solving				11	5272			
a	soup, eggs, ham			12	2824			
	soup, ham, eggs			13	6			
	eggs, ham, soup			14	2240			
	eggs, soup, ham			15	360			
	ham, soup, eggs			16	46.22			
	ham, eggs, soup			17	2643			
b	4			18	2184			
				19	1975			
Practice				20	15.32			
A.	8			21	386			
B.	6			22	77			
C.	5			23	164			
D.	7			24	9			
E.	7			25	$8 \times 6 < 7 \times 7$	$48 < 49$		
F.	3							
G.	4							
H.	4							
I.	$3 \times 8 = 24$	$8 \times 3 = 24$					percent through book	
	$24 \div 8 = 3$	$24 \div 3 = 8$					13.57	

20 Three Ways to Show Division								
Mental Math				Problem set				
	see lesson 19			1	Draw			
				2	$4 \times 9 = 36$	$9 \times 4 = 36$	$36 \div 4 = 9$	$36 \div 9 = 4$
A.	120			3	Draw			
B.	120			4	160			
C.	128			5	409			
D.	92			6	1210			
E.	216			7	twenty-four divided by six			
F.	10			8	fifteen divided by three			
G.	100			9	5			
				10	3			
Problem Solving				11	9			
		<u>939</u>		12	9			
		+ <u>91</u>		13	139.08			
		<u>1030</u>		14	37,808			
				15	238.63			
Practice				16	$210 =$	210		
A.	$10 \div 2$	$10/2$	$2 \overline{)10}$	17	1760			
				18	15.32			
B.	$24 \div 6$	$24/6$	$6 \overline{)24}$	19	264			
C.	twenty-one divided by three			20	5802			
D.	twelve divided by six			21	7657			
E.	thirty divided by five			22	25			
F.	$7 \overline{)63}$			23	78.71			
				24	$10 \times 2 > 10 + 2$	$20 > 12$		
G.	$6 \overline{)42}$			25	0			
H.	$6 \overline{)30}$							
I.	6							
J.	6							
K.	7						percent through book	
L.	6							14.29

21 "Equal Groups" Stories									
Mental Math					Problem set				
0, 25, 50, 75, 100, 125, 150, 175, 200, 175, 150, 125, 100, 75, 50, 25					1	7			
					2	Draw			
					3	$6 \times 7 = 42$	$7 \times 6 = 42$	$42 \div 6 = 7$	$42 \div 7 = 6$
0, 250, 500, 750, 1000, 1250, 1500, 1750, 2000, 1750, 1500, 1250, 1000, 750, 500, 250, 0					4	ten divided by two			
					5	313			
					6	9			
					7	7			
					8	4			
A.	135				9	8			
B.	216				10	8			
C.	180				11	7			
D.	216				12	6	>	5	
E.	190				13	2936			
F.	360				14	35.28			
G.	245				15	7533			
H.	3	don't do order of operations			16	480			
					17	560			
Problem Solving					18	7.71			
ABDOPQR					19	10,886			
abdegopq					20	4127			
					21	419			
					22	13.53			
					23	660			
					24	6			
					25	100	110	120	
Practice									
A.	30/6	5							
B.	21/7	3							
C.	56/7	8							percent through book
D.	18/3	6							15.00

22 Dividing and Writing a Remainder							
Mental Math				Problem set			
0, 50, 100, 150, 200, 250, 300, 350, 400, 450, 500, 450, 400, 350, 300, 250, 200, 150, 100, 50, 0				1	Draw		
				2	8		
				3	1		
				4	1258		
0, 500, 1000, 1500, 2000, 2500, 3000, 3500, 4000, 4500, 5000, 4500, 4000, 3500, 3000, 2500, 2000, 1500, 1000, 500, 0				5	5r 6	5	6
				6	6 r2	6	2
				7	4 r2	4	2
				8	210		
A.	50			9	120		
B.	250			10	3152		
C.	285			11	2712		
D.	224			12	58.41		
E.	168			13	9		
F.	175			14	7		
G.	210			15	7		
H.	700			16	28.49		
I.	4	*		17	21,870		
				18	15,616		
Problem Solving				19	137		
	2,5,9	$456 - 219 = 237$		20	1010		
				21	6.34		
Practice				22	5037		
A.	4 r3	4	3	23	twelve divided by four		
B.	8 r2	8	2	24	even		
C.	4 r5	4	5	25	0		
D.	5 r3	5	3				
E.	7 r1	7	1				
F.	6 r4	6	4				
G.	4 r2	4	2	*don't do order of operations (see lesson 21 for comma)			
H.	5 r5	5	5			percent through book	
I.	3 r7	3	7			15.71	

24	Dollars - Parentheses						
	Mental Math			Problem set			
	see lesson 19			1 0.75			
	see lesson 23			2 100			
				3 $5 \times 10 = 50$	$10 \times 5 = 50$	$50 \div 5 = 10$	$50 \div 10 = 5$
A.	120			4 Draw			
B.	200			5 858			
C.	336			6 27	>	17	
D.	294			7 0			
E.	252			8 20			
F.	6			9 120	=	120	
G.	3			10 8 r4		8 4	
H.	3			11 8 r2		8 2	
I.	900			12 4 r4		4 4	
J.	4 *			13 201.44			
				14 44,448			
	Problem Solving			15 41,733			
	4,8,0			16 23.7			
		<u>440</u>		17 2018			
		- <u>382</u>		18 29.44			
		58		19 17.2			
				20 3.55			
	Practice			21 $9 + 5 = 14$	$5 + 9 = 14$	$14 - 9 = 5$	$14 - 5 = 9$
A.	4			22 2			
B.	1			23 10×7			
C.	0			24 30			
D.	4			25 15			
E.	4						
F.	2						
G.	addition, subtraction, multiplication, division						
				*don't do order of operations (see lesson 21 for comma)			
H.	18.25					percent through book	
I.	3.13					17.14	

26 Practicing the Division Algorithm								
Mental Math				Problem set				
	4, 9, 14, 19, 24, 29, 34, 39, 44, 49, 54			1	2.02			
	see lesson 25			2	36			
				3	1156			
				4	Draw			
A.	0.25	0.50	0.75	5	1, 2, 4, 8, 16			
B.	340			6	0.75			
C.	170			7	91 r1	91 1		
D.	4			8	39			
E.	2			9	0.72			
F.	6			10	41			
G.	672			11	96			
H.	10	*		12	29.92			
				13	4872			
				14	560			
				15	616			
Problem Solving				16	4436			
		58	or 59	17	3.76			
	+	9	or 8	18	1498			
		67		19	23.11			
				20	2190			
				21	10			
				22	8x9=72	9x8=72	72÷8=9	72÷9=8
Practice				23	8			
A.	1.39			24	1.05			
B.	41 r6	41 6		25	500			
C.	1.55							
D.	129	129 0						
E.	0.52							
F.	52 r1	52 1		*don't do order of operations (see lesson 21 for comma)				
G.	54 r6	54 6		percent through book				
H.	1.14			18.57				

27 Solving Problems about Division of Time							
Mental Math				Problem set			
January, February, March , April, May, June, Jul				1	5.4		
0, 25, 50, 75, 100, 125, 150,				2	36		
175, 200, 175, 150, 125, 100,				3	45	30+15	
75, 50, 25, 0				4	7		
				5	1,3,7,21		
				6	0.26		
A.	7	14	21	7	0.48		
B.	210			8	38		
C.	120			9	50		
D.	10			10	Thursday		
E.	5			11	336		
F.	15			12	1588		
G.	2			13	52.74		
H.	6			14	11496		
I.	2	*		15	358		
Problem Solving				16	13.16		
Cat, Turtle, Dog				17	76		
Turtle, Dog, Cat				18	36.43		
				19	100		
				20	sixty-eight thousand, two hundred		
				21	B 300 and 400		
				22	10		
				23	400	450	500
				24	103		
Practice				25	550		
A.	400						
B.	19						
C.	710			*don't do order of operations (see lesson 21 for comma)			
D.	366						percent through book
E.	decade						19.29

28 Reading and Drawing Number Lines, Part 2									
Mental Math					Problem set				
	365	366			1	1174			
	12, 24, 36, 48, 60				2	60			
					3	1.45	0.75+0.7		
A.	14	21	28		4	6			
B.	240				5	1,2,3,5,6,10,15,30			
C.	144				6	172 r4	172	4	
D.	50				7	0.68			
E.	25				8	67 r5	67	5	
F.	75				9	63			
G.	10				10	82			
H.	70				11	368.2			
I.	7	*			12	23,244			
					13	72,504			
Problem Solving					14	350			
		67			15	5			
		- 8			16	Draw			
		59			17	B 70 and 80			
					18	50 = 50			
Practice					19	8			
A.	Draw				20	C 28			
		0			21	13			
		10			22	190	200	210	
		20			23	5			
		30			24	three hundred twenty-seven thousand, forty			
		40			25	50			
		50							
		60							
		70							
		80							
		90							percent through book
		100							20.00

*don't do order of operations (see lesson 21 for comma)

29 Reading and Writing Time from a Clock							
Mental Math				Problem set			
	100	10		1	156		
	see lesson 28			2	2073		
				3	5		
A.	12	24	36	4	13		
B.	2500			5	1,2,3,6	1, 2, 3, 6, 9, 18	
C.	175					1, 2, 3, 4, 6, 8, 12, 24	
D.	20			6	1.81		
E.	10			7	0.75		
F.	30			8	132		
G.	4			9	116 r4	116 4	
H.	36			10	9:05pm		
I.	2	*		11	12:30pm		
				12	1.00	0.5+0.5	
				13	Saturday		
Problem Solving				14	756		
	32			15	12,295		
				16	16.87		
				17	3447		
				18	23,856		
				19	28.48		
				20	4383		
				21	8:55am		
				22	10x2=20	2x10=20	
Practice					20÷10=2	20÷2=10	
A.	8:02pm			23	11		
B.	8:45am			24	800	900	1000
C.	12:20pm			25	50		
D.	12:30am						
E.	9:15am						*don't do order of operations (see lesson 21 for comma)
F.	11:25am						percent through book
G.	1:25pm						20.71

30 Multiplying by Multiples of 10 and 100							
Mental Math				Problem set			
	12	91	91.25		1	4	
	see lesson 27				2	766	
					3	1876	
A.	24	36	48		4	100	
B.	500				5	1, 2, 5, 10	
C.	258				6	2220	
D.	25				7	8400	
E.	5				8	2300	
F.	25				9	43.8	
G.	500				10	40,000	
H.	7	*			11	tens	
					12	11:30am	
					13	1.55	0.5+0.75+0.3
Problem Solving					14	1520	
	7,25				15	nine hundred forty-four thousand	
		36	252		16	13,674	
		x <u>7</u>			17	1890	
		<u>252</u>			18	52.37	
Practice					19	36 r4	36 4
A.	680				20	72 r4	72 4
B.	2400				21	52	
C.	6800				22	odd	
D.	18000				23	19	
E.	1650				24	B 350 and 360	
F.	37.50				25	900	1000 1100
G.	16500						
H.	375						
I.	2700						
J.	94				*don't do order of operations (see lesson 21 for comma)		
K.	14800						percent through book
L.	286						21.43

31 Picturing Fractions, Part 1 - Cents and Percents							
Mental Math				Problem set			
	12, 24, 36, 48, 60, 72				1	Draw	
	see lesson 19				2	64	
					3	1812	
A.	14	21	28		4	35	0.35
B.	82				5	1, 5, 25	
C.	420				6	2/3	
D.	4000				7	2/9	
E.	144				8	3	
F.	6				9	7:45 am	
G.	3				10	48.39	
H.	100	*			11	1668	
					12	274	
					13	22920	
					14	544.8	
					15	1.24	
Problem Solving					16	36 r2	36 2
	heads, heads, tails				17	224 r2	224 2
	heads, tails, heads				18	65.63	
	tails, heads, heads				19	279	
					20	2160	
					21	7	
Practice					22	1202	
A.	1/4				23	B 367	
B.	25				24	290	300 310
C.	3/4				25	38	
D.	75						
E.	2/4	1/2					
F.	50						
G.	1/10				*don't do order of operations (see lesson 21 for comma)		
H.	10						percent through book
I.	30	0.30					22.14

32 Drawing Pairs of Lines: Parallel, Intersecting, Perpendicular

Mental Math

366

365

12, 24, 36, 48, 60, 72, 84

3, 8, 13, 18, 23, 28, 33, 38, 43, 48, 53

A. 24 36 48

B. 73

C. 1540

D. 10

E. 5

F. 2

G. 224

H. 32

Problem set

1 Draw

2 5.81

3 168

4 $\frac{3}{7}$

5 1,19

6 6.91

7 424

8 56

9 1500

10 38,080

11 580.8

12 2.43

13 11:30pm

14 $10 = 10$

15 1435

16 48.38

17 82

18 0

19 odd

20 1889

21 3:49 pm

22 2

23 one hundred twenty-three thousand, four hundred

Practice

A. Draw =

B. Draw T

C. Draw X

24 85 0.85

25 Draw

percent through book

22.86

33	Drawing Angles						
	Mental Math				Problem set		
	10	100			1	10	5 2
	see lesson 32				2	54	
	4, 9, 14, 19, 24, 29, 34,				3	Draw	
	39, 44, 49, 54				4	3600	
					5	13	
A.	24	48			6	100.4	
B.	84				7	967	
C.	280				8	0.44	
D.	600				9	8	
E.	15				10	234	
F.	3				11	357,600	
G.	360				12	5.82	
H.	3	*			13	325.6	
					14	2160	
	Problem Solving				15	133 r5	¹³³ 5
	heads, tails, tails				16	20	= 20
	tails, heads, tails				17	C	
	tails, tails, heads				18	1, 2, 3, 6, 9, 18	
					19	3/4	75
					20	200	
					21	Thursday	
					22	denominator	
					23	9x10=90	10x9=90
						90÷9=10	90÷10=9
	Practice				24	690	700 710
A.	Draw	<			25	130	
B.	Draw	obtuse					
C.	Draw	L					
D.	right				*don't do order of operations (see lesson 21 for comma)		
E.	acute						percent through book
F.	obtuse						23.57

34 Rounding Numbers Using a Number Line							
Mental Math				Problem set			
6	18			1	Draw		
12, 24, 36, 48, 60, 72, 84, 96				2	500		
6, 12, 18, 24, 30, 36, 42, 48, 54, 60, 66, 72, 78, 84, 90, 96				3	80		
				4	6		
					20	10	4
A.	1.00	1.25	1.50	5	4		
B.	378			6	Draw		
C.	250			7	1,7		
D.	20			8	C 9:00		
E.	10			9	64.88		
F.	4			10	1909		
G.	700			11	9.14		
H.	5	*		12	1516		
				13	50,670		
				14	200.2		
				15	383,200		
Problem Solving				16	374		
	1,2,9			17	0.96		
		<u>12</u>		18	273 r5	273	5
	x	8		19	88.03		
		<u>96</u>		20	9		
				21	1/3 less		
Practice				22	C horizontal		
A.	70			23	1:15 pm		
B.	90			24	Draw		
C.	50			25	70		
D.	100						
E.	700						
F.	400			*don't do order of operations (see lesson 21 for comma)			
G.	800					percent through book	
H.	400					24.29	

35	Division with Zeros in the Quotient							
Mental Math					Problem set			
	50	5			1	Draw		
A.	50				2	15		
B.	130					50	25	10
C.	400				3	1440		
D.	108				4	1949		
E.	25				5	120		
F.	5				6	173		
G.	1720				7	60 r5	60	5
H.	1	*			8	1.06		
Problem Solving					9	107 r1	107	1
	heads, heads, tails	heads, heads, heads			10	65 r3	65	3
	heads, tails, heads	tails, tails, tails			11	1.09		
	tails, heads, heads				12	47,500		
	tails, tails, heads				13	80		
	tails, heads, tails				14	94		
	heads, tails, tails				15	8		
					16	237.2		
					17	5	<	6
Practice					18	21.71		
A.	20 r1	20	1		19	7.54		
B.	40 r2	40	2		20	3600		
C.	40 r1	40	1		21	3024		
D.	407				22	490	500	510
E.	30 r2	30	2		23	1/4	25	
F.	1.05				24	B right		
G.	3.09				25	9:52 am		
H.	830 r1	830	1					
I.	30 r1	30	1					
J.	2.06				*don't do order of operations (see lesson 21 for comma)			
K.	0.80						percent through book	
L.	602 r2	602	2				25.00	

36 "Larger-Smaller-Difference" Stories								
Mental Math					Problem set			
	see lesson 27				1	Draw		
	36	48	60		2	342		
A.	300				3	82710		
B.	1100				4	Draw		
C.	2400				5	100		
D.	210				6	1, 2, 4, 7, 14, 28		
E.	21				7	55		
F.	4.00				8	108		
G.	2.00				9	70 r3	70	3
H.	6	*			10	30 r3	30	3
Problem Solving					11	500 r1	500	1
	AER				12	102		
	ARE				13	60		
	ERA				14	500		
	EAR				15	6165		
	REA				16	1530		
	RAE				17	1.07		
	50%				18	214		
					19	30520		
					20	59.99		
					21	540,000		
					22	2/5	less	
					23	2:45 pm		
					24	4		
					25	2200	2300	2400
Practice								
A.	13				*don't do order of operations (see lesson 21 for comma)			
B.	4200						percent through book	
C.	329						25.71	

37 Using Fraction Manipulatives, Part 1								
Mental Math				Problem set				
	4	8	12		1	55	0.55000	
					2	7		
A.	90				3	84		
B.	170				4	Draw		
C.	720				5	three hundred five thousand, three hundred		
D.	434							
E.	700							
F.	12				6	1/4		
G.	6				7	70	< 80	
H.	3000				8	0.51		
I.	6	*			9	109 r4	109 4	
					10	203 r2	203 2	
Problem Solving					11	2.58		
			13		12	4730		
		x	4		13	429		
			52		14	77		
					15	79.37		
					16	262.80		
Practice					17	42,000		
A.	N/A				18	207		
B.					19	3920		
C.					20	7/10	70	
D.					21	600		
E.					22	3		
F.					23	odd		
G.					24	8		
H.					25	500	510 520	
I.								
J.					*don't do order of operations (see lesson 21 for comma)			
K.							percent through book	
L.							26.43	

38 Drawing Segments to Close in an Area									
Mental Math					Problem set				
	see lesson 34				1	Draw			
	see lesson 34				2	37			
A.	600				3	244			
B.	1500				4	40	20	8	12
C.	6000				5	70			
D.	240				6	1520			
E.	24				7	4020			
F.	12				8	Draw			
G.	6				9	3929			
H.	430				10	669			
I.	8	*			11	0.19			
					12	1534			
					13	14,720			
Problem Solving					14	378			
	walk, walk				15	560,000			
	wait, wait				16	70	0.7		
	walk, wait				17	42			
	wait, walk				18	104			
					19	4.05			
					20	1.38			
					21	3472			
					22	1/4	25		
					23	1900	2000	2100	
					24	A. Wall			
					25	12:45 pm			
Practice									
A.	no								
B.	yes								
C.	Draw				*don't do order of operations (see lesson 21 for comma)				
D.	Draw							percent through book	
E.	Draw							27.14	

40	Picturing Fractions, Part 2							
Mental Math				Problem set				
	see lesson 34				1	Draw		
	60	72			2	Draw	50	
					3	65		
A.	900				4	Draw		
B.	1800				5	1922		
C.	3600				6	1, 2, 4, 5, 8, 10, 20, 40		
D.	356				7	5/8	more	
E.	356				8	9		
F.	8	*			9	50		
G.	0.30				10	Draw		
H.	0.15				11	136.60		
I.	0.06				12	90		
					13	69.70		
Problem Solving					14	67		
	CAR 123				15	53280		
	CAR 132				16	380		
	CAR 231				17	288,000		
	CAR 213				18	105	<	115
	CAR 312				19	2.04		
	CAR 321				20	100		
					21	2820		
	6				22	8820		
					23	0.13		
					24	15	0.15	
					25	B		
Practice								
A.	Draw							
B.	Draw			*don't do order of operations (see lesson 21 for comma)				
C.	Draw						percent through book	
D.	Draw						28.57	

41 Half of an Odd Number - Fractions on a Number Line

Mental Math

grandfather
see lesson 34
60 72 84

- A. 600
- B. 1500
- C. 700
- D. 120
- E. 22
- F. 0.40
- G. 0.20
- H. 0.08
- I. 0 *

Problem set

- 1 Draw
- 2 53,600
- 3 7
- 4 295
- 5 A
- 6 600
- 7 449
- 8 Draw 75
- 9 366
- 10 8
- 11 4168
- 12 1665
- 13 1920
- 14 351 r8 351 8
- 15 2.27
- 16 12.77

Problem Solving

answers may vary

$$\begin{array}{r} \underline{99} \\ + \quad \underline{1} \\ \hline \underline{100} \end{array}$$

- 17 707,400
- 18 7.02
- 19 30,000
- 20 25 1/2 25.5
- 21 C Quadrilateral
- 22 2100 2200 2300

Practice

- A. 7 1/2 7.5
- B. 10 1/2 10.5
- C. 12 1/2 12.5
- D. 24 1/2 24.5
- E. 3/4
- F. 1 1/4

*don't do order of operations (see lesson 21 for comma)

- G. 6 2/5 percent through book
- H. 7 3/5 29.29

42 Comparing Fractions by Drawing Pictures							
Mental Math				Problem set			
	aunt			1	Draw		
	7, 14, 21, 28, 35, 42, 49, 56, 63, 70, 77, 84			2	500		
	21	28	42	3	8 4/5		
				4	24,960		
				5	0.25	<	0.333
A.	80			6	50 1/2	50.5	
B.	630			7	3		
C.	2400			8	80		
D.	144			9	1, 5, 7, 35		
E.	1000			10	204		
F.	10 1/2	10.50		11	21.25		
G.	1			12	852		
H.	0.50			13	315		
I.	1	*		14	382.80		
				15	448,000		
				16	80		
Problem Solving				17	72		
	24	6,12,18,24,30,36		18	1.04		
		8,16,24,32,40,48		19	309		
				20	80 r3	80 3	
				21	524 r2	524 2	
				22	375		
				23	11:40 pm		
				24	35	0.35	
				25	20		
Practice							
A.	0.5	<	0.667				
B.	0.5	=	0.5	*don't do order of operations (see lesson 21 for comma)			
C.	0.333	>	0.25			percent through book	
D.	0.667	<	0.75			30.00	

43 Pictures of Mixed Numbers - Dividing Remainders, Part 1											
Mental Math					Problem set						
Alice & Bob					1	Draw					
	Donald	Carol		George	Fiona	2	1/6				
	Edward				Heather	3	1 1/3	1.333			
						4	28				
A.	Grandmother					5	1/3				
B.	Granddaughter					6	0.25	<	0.333		
C.	Uncle					7	12 1/2	12.5			
D.	Neice					8	1				
E.	Son-in-law					9	75	0.75			
F.	Mother-in-law					10	2 3/4				
G.	Cousin					11	879				
						12	2882				
						13	3352				
						14	230.4				
						15	615,200				
						16	3.06				
						17	480				
						18	4.32				
Problem Solving						19	18,710				
	n/a					20	2 2/3				
						21	700				
						22	1/10	10			
						23	C				
						24	90	100	110		
						25	150				
Practice											
A.	1 1/3										
B.	2 1/4										
C.	Draw										
D.	Draw						percent through book				
E.	2 1/4	2.25					30.71				

44 Adding and Subtracting Fractions with Common Denominators

Mental Math

- cousin
- 6 24 30
- A. 400
- B. 620
- C. 168
- D. 6400
- E. 250
- F. 7.5 or 7 1/2
- G. 0.05
- H. 0.01
- I. 0 *

Problem set

- 1 Draw
- 2 1/10 10
- 3 1692
- 4 37 1/2
- 5 0.5 < 0.667
- 6 2 1/4
- 7 2 1/10
- 8 9/10
- 9 0 0/2
- 10 5 3/4 5 3/4
- 11 10 2/3
- 12 8766
- 13 2578
- 14 2.44
- 15 562,800
- 16 20,640
- 17 1002
- 18 604
- 19 1204 r3 1204 3
- 20 1.33
- 21 1.15
- 22 100
- 23 Draw
- 24 6
- 25 6:06 pm

Problem Solving

$$\begin{array}{r} 24 \\ 4 \overline{)96} \end{array}$$

Practice

- A. 3/10
 - B. 1/4
 - C. 3 2 2/2
 - D. 2 3/10
- *don't do order of operations (see lesson 21 for comma)
- percent through book
- 31.43

45	Short Division												
Mental Math					Problem set								
	granddaughter								1	Draw			
	see lesson 25								2	3000			
	see lesson 34								3	3			
									4	5 1/4			
									5	3			
A.	40				F.	50			6	0.75	>	0.6	
B.	400				G.	4			7	7/10			
C.	1				H.	150			8	3 2/3			
D.	0				I.	12.5 or 12 1/2			9	3/10			
E.	192				J.	1 *			10	3	3 0/4		
									11	2 1/2			
									12	200			
Problem Solving									13	2/5			
	24								14	10	=	10	
	3456	4563	5634	6345					15	50			
	3465	4536	5643	6354					16	26.34			
	3564	4635	5346	6435					17	5467			
	3546	4653	5364	6453					18	1647			
	3645	4356	5436	6534					19	27,680			
	3654	4365	5463	6543					20	652.50			
									21	469,000			
Practice									22	434			
A.	145		145 0						23	2.20			
B.	83 r2		83 2						24	33 r1		33 1	
C.	140 r3		140 3						25	A			
D.	125		125 0										
E.	114 r2		114 2										
F.	83 r6		83 6										
G.	120		120 0		*don't do order of operations (see lesson 21 for comma)								
H.	205 r1		205 1		percent through book								
I.	143		143 0		32.14								

46 Using Fraction Manipulatives, Part 2

Mental Math

Problem set

	nephew					1	Draw		
	40	60				2	7		
A.	160					3	5.43		
B.	600					4	70		
C.	2/3					5	Draw 25		
D.	0					6	1, 2, 3, 5, 6, 10, 15, 30		
E.	216					7	20		
F.	6					8	2 3/4		
G.	3						two and three fourths		
H.	750					9	3 3/4		
I.	3.5	or 3 1/2				10	9 5/8		
J.	3	*				11	3/8		
						12	11,160		

Problem Solving**

answers may vary (bolded numbers excluded)	6	7	2	15	13	299		
	1	5	9	15	14	6640		
	8	3	4	15	15	70		
	15	15	15		16	4/5	3/5 - 1/5	
					17	14 r2	14 2	

Practice

**all rows and columns must = 15

A.	Show					18	720		
B.	Show					19	49 1/2	49.5	
C.	Show	2				20	B. 160		
D.	less					21	Draw		
E.	66 2/3					22	April		
F.	60					23	6:53 am		
G.	50					24	150	160	170
H.	1/8	7/8				25	76		
I.	1/5 + 2/5 =	3/5							
J.	3/8 + 5/8 =	1	8/8						*don't do order of operations (see lesson 21 for comma)
K.	2/3 - 1/3 =	1/3							percent through book
L.	5/8 - 2/8 =	3/8							32.86

47 Dividing Remainders, Part 2 - Adding and Subtracting									
Whole Numbers, Fractions, and Mixed Numbers									
Mental Math					Problem set				
	nephew					1	Draw		
	dime	quarter				2	8		
						3	52		
A.	160					4	Draw	25	
B.	500					5	160		
C.	1					6	2 1/2		
D.	1/3					7	7 1/2		
E.	280					8	25	24 2/2	
F.	240					9	1 1/3		
G.	4.5	or 4 1/2				10	3		
H.	4					11	1 2/5		
I.	7	*				12	4 3/8		
J.	25					13	12 4/8	12 4	
						14	4		
Problem Solving						15	28,560		
	8					16	580.20		
						17	873,000		
						18	18.80		
						19	4286		
						20	5405		
						21	127 r1	127 1	
Practice						22	16 r4	16 4	
A.	3 3/4	3 3				23	2008 r3	2008 3	
B.	14 2/7	14 2				24	6		
C.	5 1/2					25	Friday		
D.	3 1/4								
E.	3 2/3								
F.	3 3/4					*don't do order of operations (see lesson 21 for comma)			
G.	2								percent through book
H.	2 3/4								33.57

48 Reading Lengths on a Metric Scale							
Mental Math				Problem set			
Diana & Edmund				1	Draw		
Gloria & Fred		Bernice & Charles		2	1.48		
Harold		Andrew		3	46		
				4	20		
				5	1640		
A.	cousin			6	1 2/3	1	2
B.	uncle			7	2 3/5		
C.	nephew			8	2 1/4		
D.	Brother-in-law			9	4		
E.	Sister-in-law			10	1 1/4		
F.	Grandmother			11	66 2/3		
G.	Grandson			12	8 1/3		
				13	8 7/8		
				14	16		
Problem Solving				15	22,772		
	n/a			16	3198		
				17	7170		
				18	343,700		
				19	17,760		
				20	635		
				21	296 r4	296	4
				22	Draw	66 2/3	
				23	260		
				24	10:47 am		
				25	1, 2, 5, 10, 25, 50		
Practice							
A.	10						
B.	50						
C.	cm	mm					
D.	15					percent through book	
E.	3					34.29	

49 Reading an Inch Ruler to the Nearest Fourth of an Inch									
Mental Math					Problem set				
	aunt					1	Draw		
	25, 50, 75, 100, 125, 150, 175, 200, 225, 250, 275, 300					2	7.53		
	0.75	1.50				3	Draw		
						4	625		
						5	2 2/3		2 2
A.	280					6	1		
B.	1000					7	1 1/2		
C.	1					8	4 2/3		
D.	2/4 or 1/2					9	6 1/4		
E.	294					10	3 3/4		
F.	2.50					11	3 3/8		
G.	5					12	5 1/4		
H.	5					13	4		
I.	5	*				14	234.8		
						15	36.39		
						16	1172		
						17	1070 r6		1070 6
						18	1404		
Problem Solving						19	21,435		
		56				20	651,980		
	3	<u>168</u>				21	4.27		
						22	Draw	60	20
						23	260		
						24	B		
Practice						25	150		
A.	1/2								
B.	1 1/4								
C.	1 3/4								
D.	2 1/2						*don't do order of operations (see lesson 21 for comma)		
E.	3 1/4						percent through book		
F.	3 3/4						35.00		

50	Illustrating Fraction Stories							
Mental Math				Problem set				
	brother-in-law			1	3 2/3	3 2		
	quarter			2	486			
				3	40			
A.	270			4	1776			
B.	520			5	32			
C.	7/10			6	875			
D.	3/10			7	15	<	20	
E.	492			8	300			
F.	7.50			9	Draw	60		
G.	25.5 or 25 1/2			10	May			
H.	6			11	1 3/4			
I.	0 *			12	5 5/7			
				13	1 2/5			
Problem Solving				14	3 1/3			
	3 7			15	1 1/12			
	0 10			16	7662			
	1 9			17	415			
	2 8			18	750,400			
	4 6			19	22,680			
	5 5			20	605			
	6 4			21	320 r5	320 5		
	7 3			22	16.63			
	8 2			23	19304			
	9 1			24	20			
				25	B			
Practice				*don't do order of operations (see lesson 21 for comma)				
A.	12			percent through book				
B.	45			35.71				

51 Practicing the Directions of the Compass									
Mental Math					Problem set				
uncle					1	Draw			
20, 40, 60, 80, 100, 120, 140, 160, 180, 200, 180, 160, 140, 120, 100, 80, 60, 40, 20					2	4	$(0.1 \times 2) + (0.05 \times 2) = 0.3$		
					3	6			
					4	18			
					5	1 1/4	1 1		
					6	west			
A.	400				7	Draw	33 1/3		
B.	940				8	25	24 2/2		
C.	4/5				9	6 5/8			
D.	0	0/5			10	3	6 2/3 - 3 2/3		
E.	136				11	152			
F.	15				12	60			
G.	15.5	or 15 1/2			13	77,400			
H.	3				14	63,000			
I.	8	*			15	275			
Problem Solving					16	50.16			
7					17	15.04			
					18	407			
					19	9.35			
0 0 0 0					20	54 r7	54 7		
0 0 0 0					21	807			
0 0 0 0					22	30 1/2			
0 0 0 0					23	3100	3200	3300	
					24	1 2/3			
					25	2			
Practice									
A.	Draw								
B.	south								
C.	west								
D.	north								
					*don't do order of operations (see lesson 21 for comma)				
					percent through book				
					36.43				

52 Simplifying Mixed Measures

Mental Math

daughter-in-law
40 60 80

- A. 380
- B. 360
- C. 2
- D. 1
- E. 1.5 or 1 1/2
- F. 1
- G. 5 *
- H. 102

Problem set

- 1 138
- 2 1912
- 3 north
- 4 66
- 5 C 70,000
- 6 14
- 7 Draw 37 1/2
- 8 2 1/4
- 9 7 3/4
- 10 4 4/5
- 11 2 5/8
- 12 1/3
- 13 2
- 14 2 4/9
- 15 112,391
- 16 45,206
- 17 3,941
- 18 37,832
- 19 720,480
- 20 432
- 21 204
- 22 200 r5 200 5
- 23 625
- 24 24
- 25 10:35 pm

Problem Solving

$$\begin{array}{r} 75 \\ \times \quad 9 \\ \hline 675 \end{array}$$

Practice

- A. 74
 - B. 200
 - C. 150
 - D. 44
- *don't do order of operations (see lesson 21 for comma)
percent through book
37.14

53 Reading and Writing Whole Numbers in Expanded Notation

Mental Math

Problem set

		Carol & Dave			1	Draw		
	Ivan & Helen		Fred & Emily		2	15		
		James		Gloria	3	south		
					4	C 6000		
A.	nephew				5	190		
B.	daughter-in-law				6	Draw	16 2/3	16.667
C.	son-in-law				7	5		
D.	grandmother				8	290		
E.	cousin				9	502		
F.	brother-in-law				10	(4x1,000)+(7x100)		
G.	grandson				11	195,140		
H.	brother				12	52,160		
					13	8254		
					14	208.68		
					15	392,940		
					16	723,330		
Problem Solving					17	607 r5		607 5
	n/a				18	600 r8		600 8
					19	100		
					20	5 2/3		3 1/3 + 2 1/3
					21	100		
					22	1.60		
					23	25		
Practice					24	11:59 pm		
A.	(5x10) + (6x1)				25	125		
B.	(5x1,000) + (4x10)							
C.	(5x1,000) + (2x100) + (8x10)							
D.	6,040							
E.	570							
F.	84,000							percent through book
G.	9,302							37.86

54 Finding Information to Solve Problems							
Mental Math				Problem set			
	cousin			1	Draw		
	12, 24, 36, 48, 60, 72, 84, 96, 108			2	west		
	24	48		3	16		
				4	A 700,000		
A.	530			5	4		
B.	530			6	6,400		
C.	1			7	5		
D.	2			8	19		
E.	238			9	sixty three thousand, two hundred fifty		
F.	6						
G.	3			10	Draw	62 1/2	62.5
H.	12	*		11	146,234		
				12	25		
				13	759,498		
Problem Solving				14	863		
	1	4	5	15	358,740		
	2	3	5	16	12,000		
	3	2	5	17	5		
	4	1	5	18	75 r3		75 3
				19	12 1/2	12.5	
				20	15 7/10		
Practice				21	2 1/10	3 9/10-1 8/10	
A.	N/A			22	14700		
B.				23	34		
C.				24	114		
D.				25	three and nine tenths		
E.							
F.							
G.							
H.							percent through book
I.							38.57

*don't do order of operations (see lesson 21 for comma)

55 Solving Two-Step Word Problems							
Mental Math				Problem set			
sister-in-law				1	Draw		
250, 275, 300, 325, 350, 375, 400, 425, 450, 475, 500, 475, 450, 425, 400, 375, 350, 325, 300, 275, 250				2	30	Keith 20	
				3	12		
				4	west		
				5	5		
A.	500			6	506		
B.	800			7	2.50		
C.	9/10			8	230		
D.	1			9	25,300		
E.	5			10	Draw	16 2/3	16.667
F.	1			11	11 5/8		
G.	4			12	8		
H.	5	*		13	6755		
Problem Solving				14	21.87		
28				15	999		
				16	40,000		
				17	6,000		
0		1	1	18	200 r5	200	5
00		2	3	19	9.54		
000		3	6	20	0.01		
0000		4	10	21	one hundred fifty thousand		
00000		5	15				
000000		6	21	22	1200	1300	1400
0000000		7	28	23	ten thousand		
				24	1750		
				25	7		
Practice				*don't do order of operations (see lesson 21 for comma)			
A.	19	61				percent through book	
B.	29	58				39.29	

56 Making Equal Groups to Find an Average

Mental Math

3, 6, 9, 12, 15, 18, 21, 24,
27, 30, 33, 36

6 15 30

- A. 600
- B. 1000
- C. 3
- D. $1 \frac{1}{3}$
- E. 5
- F. 4
- G. 5
- H. 272
- I. 2 *

Problem set

- 1 Draw
- 2 16 Thi 11
- 3 7 21
- 4 36
- 5 135
- 6 4
- 7 44,919
- 8 Draw 12 $\frac{1}{2}$
- 9 13 26
- 10 2266
- 11 26.28
- 12 2056.80
- 13 3990
- 14 6
- 15 7
- 16 600 r6 600 6
- 17 10.04
- 18 111 r1 111 1
- 19 3
- 20 $6 \frac{6}{7}$
- 21 $7 \frac{7}{10}$ 9 $\frac{9}{10}$ -2 $\frac{2}{10}$
- 22 May
- 23 C 1200
- 24 64
- 25 9

Problem Solving

- 1 6 7
- 2 5 7
- 3 4 7
- 4 3 7
- 5 2 7
- 6 1 7

Practice

- A. 7 28 *don't do order of operations (see lesson 21 for comma)
- B. 14 28 percent through book
- C. 7 21 40.00

57 Multiplying by Two-Digit Numbers							
Mental Math				Problem set			
	12, 24, 36, 48, 60, 72, 84, 96, 108, 120			1	129		
	24	36	48	2	0.95		
				3	45	75	
				4	1001		
A.	26			5	5	>	4
B.	400			6	one thousand, seven hundred sixty		
C.	1			7	Draw	16 2/3	16.667
D.	2			8	62,490		
E.	12 1/2	12.5		9	C 2400		
F.	6			10	2 1/2		
G.	2			11	6	12	
H.	272			12	516		
I.	3	*		13	22.32		
Problem Solving				14	5952		
	15	see lesson 55 for drawing		15	103.88		
	21			16	25,654		
	28			17	0.08		
				18	30,000		
				19	0.75		
				20	10.34		
				21	475		
				22	5 3/4		
Practice				23	1 1/8	2 2/8-1 1/8	
A.	384			24	3		
B.	14.26			25	201		
C.	3072						
D.	5412						
E.	49.98			*don't do order of operations (see lesson 21 for comma)			
F.	5481					percent through book	
						40.71	

58 Identifying Numbers Through Hundred-Millions'							
Mental Math				Problem set			
	6, 12, 18, 24, 30, 36, 42, 48, 54, 60			1	36	60	
	60, 120, 180, 240, 300			2	60		
	120	180		3	east		
				4	5		
A.	130			5	148		
B.	0.75			6	Draw	62 1/2	62.5
C.	30			7	two hundred fifty thousand		
D.	2						
E.	15			8	5	15	
F.	6			9	7		
G.	5	*		10	1200		
				11	ten million		
				12	1254		
				13	39.01		
Problem Solving				14	14,863		
	same person??			15	90.16		
	mother			16	27,472		
	man (no siblings)	father		17	6.81		
		other man		18	66		
				19	1082		
				20	567		
				21	19.60		
				22	3 7/10		
Practice				23	5	5 3/4-3/4	
A.	hundred			24	2.93		
B.	million			25	D		
C.	hundred thousand						
D.	ten million						
E.	7			*don't do order of operations (see lesson 21 for comma)			
F.	B 1,372,486					percent through book	
G.	million					41.43	

59 Naming Numbers Through Hundred Millions							
Mental Math				Problem set			
	12, 24, 36, 48, 60, 72, 84, 96, 108, 120			1	2.40		
	24, 48, 72, 96, 120			2	Draw		
	48	72		3	10	33 1/3	33.333
A.	62			4	fifty-one million, six hundred ninety-eight thousand, five hundred two		
B.	1						
C.	1 1/10			5	B 20 million		
D.	306			6	246,652,900		
E.	12	6		7	8463		
F.	1	*		8	2400		
Problem Solving				9	80		
			63	10	5	15	
	x		9	11	4 5/8	3 5/8 + 1	
			567	12	1/8	3 7/8 - 3 6/8	
				13	13,370		
				14	489.83		
				15	66,360		
				16	22,984		
				17	21.89		
				18	7010		
				19	900 r5	900 5	
				20	9.57		
Practice				21	2000		
A.	twenty-one million, four hundred sixty-two thousand, three hundred			22	1240	1250	1260
				23	five and three eighths		
B.	one hundred ninety-six million, five hundred thousand			24	2 1/2	2.5	
				25	1:10 am		
C.	19,225,500			*don't do order of operations (see lesson 21 for comma)			
D.	750,300,000					percent through book	
E.	206,712,934					42.14	

60 Calculating the Perimeter of Polygons - Identifying the Measures of Circles

Mental Math				Problem set			
6, 12, 18, 24, 30, 36, 42, 48, 54, 60				1	21		
60, 120, 180, 240, 300, 360				2	11	22	
120	180	240	600	3	million		
				4	10		
				5	Draw	50	
A.	135			6	1, 2, 4	1, 2, 4, 8	1, 2, 3, 4, 6, 12
B.	1500			7	7		
C.	5			8	19,490,000		
D.	0			9	8 2/3	6 + 2 2/3	
E.	90	150		10	0	4 2/3 - 4 2/3	
F.	2	*		11	60,000		
				12	56,000		
				13	10		
				14	439.92		
				15	64,010		
Problem Solving				16	74,708		
see lesson 55				17	20.27		
36				18	2231		
3,6,10,15,21,28,36,45,55				19	153.80		
4,9,16,25,36,49,64,81,100				20	6.33		
				21	703		
				22	536 r1	536	1
Practice				23	B 1240		
A.	5			24	3		
B.	3			25	10		
C.	16						
D.	12						
E.	circumference						
F.	diameter			*don't do order of operations (see lesson 21 for comma)			
G.	12			percent through book			
H.	16			42.86			

61 Dividing by Multiples of 10								
Mental Math				Problem set				
A.	12			1	1.05			
B.	21			2	24			
C.	23			3	1240			
D.	33			4	B 7,000,000			
				5	Draw	50		
				6	0.25	0.50		
				7	three million, one hundred fifty thousand			
Problem Solving				8	1, 3	1, 3, 9	3, 4, 6, 12	
	6			9	15 r4	15	4	
	0 0 0 0 0 0	6		10	0.14			
	0 0 0 0 0 0	12		11	15 r10	15	10	
	0 0 0 0 0 0	18		12	200,000			
	0 0 0 0 0 0	24		13	25,898			
	0 0 0 0 0 0	30		14	293.76			
	0 0 0 0 0 0	36		15	33 3/4			
				16	19			
				17	368 r3	368	3	
				18	840 r4	840	4	
				19	5556			
				20	13.74			
				21	9			
				22	24			
				23	1 1/2			
Practice				24	1946			
A.	0.14			25	15			
B.	12 r5	12	5					
C.	0.12							
D.	0.16							
E.	12 r10	12	10					percent through book
F.	34 r5	34	5					43.57

62 Multiplying by Three-Digit Numbers, Part 1

Mental Math

- A. 7
- B. 15
- C. 16
- D. 28
- E. 64
- F. 3
- G. 10
- H. 2 *

Problem set

- 1 2.65
- 2 207
- 3 302
- 4 9
- 5 75
- 6 Draw 66 2/3 66.67
- 7 679,542,500
- 8 0.12
- 9 12 r10 12 10
- 10 12 r20 12 20
- 11 28,782

Problem Solving

Draw

- 12 97.50
- 13 476,556
- 14 40
- 15 320,000
- 16 30,000
- 17 81,000
- 18 1200
- 19 4000
- 20 20
- 21 11 9/11
- 22 2/3
- 23 7 1/3 7 2/3 - 1/3
- 24 4300
- 25 2773

Practice

- A. 122,484
- B. 308,758
- C. 309,504
- D. 477,990

*don't do order of operations (see lesson 21 for comma)

percent through book

44.29

63 Multiplying by Three-Digit Numbers, Part 2

Mental Math

- A. 18
- B. 25
- C. 31
- D. 37
- E. 60 30 20
- F. 294
- G. 21
- H. 7 *

Problem set

- 1 11
- 2 30
- 3 east
- 4 69 138
- 5 5
- 6 10
- 7 345,614,784
- 8 60
- 9 36000
- 10 280,000
- 11 74,880

Problem Solving

$$\begin{array}{r} 37 \\ \times 9 \\ \hline 333 \end{array}$$

- 12 700.35
- 13 180,648
- 14 30
- 15 719 r3 719 3
- 16 300 r3 300 3
- 17 10.76
- 18 162,664
- 19 10,757
- 20 95.44
- 21 2
- 22 10 1/8

Practice

- A. 56,160
- B. 300.00
- C. 27,600
- D. 36,480
- E. 47,736
- F. 255.00
- G. 23,460
- H. 31,008

*don't do order of operations (see lesson 21 for comma)

percent through book

45.00

64 Learning the Terms Divisor, Dividend and Quotient							
Mental Math				Problem set			
				1	64		
				2	1000		
A.	19			3	circumference		
B.	14			4	ten and seven tenths		
C.	29			5	40		
D.	24			6	east?		
				7	48	?x4=12	
				8	hunderd thousand		
				9	1, 5	1, 3, 5, 15	1, 2, 4, 5, 10, 20
				10	18		
				11	0	$3\frac{2}{3} - 3\frac{2}{3}$	
Problem Solving				12	$4\frac{2}{3}$	$3\frac{1}{3} + 1\frac{1}{3}$	
	35	13	22	13	0.13		
				14	395 r1	395 1	
				15	3		
				16	14.36		
				17	127,746		
				18	431		
Practice				19	1242		
A.	18	6×3		20	361,192		
B.	4	$\frac{8}{2}$		21	$\frac{1}{10}$		
C.	3	$\frac{15}{5}$		22	$4\frac{1}{3}$		
D.	dividend			23	$4\frac{1}{2}$		
E.	quotient			24	15		
F.	divisor			25	1:35 pm		
G.	dividend						
H.	divisor						
I.	quotient						
J.	divisor						
K.	dividend					percent through book	
L.	quotient					45.71	

65 Dividing and Writing Quotients with Fractions							
Mental Math				Problem set			
A.	17			1	0.8		
B.	34			2	5 1/4	5.25	
C.	23			3	60		
D.	24			4	1800		
E.	80	40	20	5	A 186,542,039		
F.	400			6	40		
G.	7			7	21 r10	21	10
H.	192			8	23 r2	23	2
I.	8			9	16		
				10	5800		
				11	100		
Problem Solving				12	70		
	Draw			13	332,031		
				14	2457		
				15	12.07		
				16	604		
				17	515		
				18	4/5		
				19	3		
				20	2 1/6		
				21	20 2/3	20	2
Practice				22	4		
A.	4 1/4	4	1	23	27	÷3=9	
B.	6 2/3	6	2	24	1000		
C.	3 1/5	3	1	25	24		
D.	9 4/5	9	4				
E.	5 1/4	5	1				
F.	4 9/10	4	9				
G.	12 5/6	12	5				
H.	4 3/10	4	3				percent through book
I.	3 7/8	3	7				46.43

66	Fractions Equal to 1 - Subtracting a Fraction from 1							
Mental Math				Problem set				
A.	23			1	204			
B.	4			2	6	60		
C.	28			3	Draw			
D.	29			4	1, 2, 4	1, 2, 4, 8	1, 2, 4, 5, 10, 20	
E.	24			5	24	40		
F.	50 1/2			6	53			
G.	5			7	1			
H.	3	*		8	4	3 3/3		
Problem Solving				9	3	2 8/8		
	10			10	3/4			
	0000000000	10		11	5/8			
	0000000000	20		12	2 5/8			
	0000000000	30		13	158,250			
	0000000000	40		14	10,903			
	0000000000	50		15	176,272			
	0000000000	60		16	eight and nine tenths			
	0000000000	70		17	3 3/4	3 3		
	0000000000	80		18	0.18			
	0000000000	90		19	17 r7	17 7		
	0000000000	100		20	14 r10	14 10		
	0000000000			21	1825.2			
Practice				22	20			
A.	3/3			23	B 3 2/2			
B.	=			24	5/5			
C.	1			25	6			
D.	=							
E.	6	5 5/5						
F.	3/4			*don't do order of operations (see lesson 21 for comma)				
G.	1/3			percent through book				
H.	infinity (∞)			47.14				

67 Finding a Fraction to Complete a Whole

Mental Math

- A. 7
- B. 35
- C. 9
- D. 14
- E. 90 30 10
- F. 225
- G. 3
- H. 13 *

Problem set

- 1 31
- 2 0.17
- 3 100
- 4 12
- 5 800 500+300
- 6 7 4
- 7 3 4 6
- 8 4
- 9 1 6/6
- 10 5 4 5/5
- 11 7/8
- 12 3 3/5
- 13 20.62
- 14 2,699.26
- 15 4.08
- 16 2 3/10 2 3
- 17 7/8 87 1/2 87.5
- 18 134,640
- 19 16 r3 16 3
- 20 1200
- 21 67
- 22 =
- 23 8/8
- 24 3/10
- 25 25

Practice

- A. 3/4 *don't do order of operations (see lesson 21 for comma)
- B. 3/8 percent through book
- C. 2/5 47.86

68	Recongizing Halves								
Mental Math				Problem set					
	one half, two fourths, three sixths, four eighths, five tenths, six twelfths, seven fourteenths, eight sixteenths, nine eightenths, ten twentieths			1	75				
				2	5/6	16 2/3	16.667		
				3	159				
				4	7040				
				5	1200	60x20			
				6	D 48/98	48/96			
A.	37			7	1, 2, 4	1, 2, 3, 4, 6, 12	1, 2, 4, 8, 16		
B.	19			8	80				
C.	2 1/2	4 1/2	7 1/2	9	4/5				
D.	2/3			10	1/4				
E.	3/4			11	2 1/3				
F.	50			12	1	10/10			
				13	10	9 4/4			
Problem Solving				14	2479				
	8.5	5.5		15	30.66				
				16	200				
				17	182,830				
				18	605				
				19	4 1/6		4 1		
				20	22 r14		22 14		
				21	31 r13		31 13		
				22	10,000				
				23	3 7/10				
				24	10/20	20/40			
				25	February				
Practice									
A.	C 24/50	25/50					percent through book		
B.	8/16	4/8					48.57		

69		Estimating Arithmetic Answers						
Mental Math				Problem set				
	one half, two fourths, three sixths, four eighths				1	52	72	
	5/10, 6/12, 7/14, 8/16, 9/18, 10/20				2	10		
					3	5	20	
					4	Draw	2/3	
A.	18					66	2/3	66.667
B.	24				5	1600	1599	
C.	2 2/3	3 1/3			6	9/10		
D.	4/5				7	5/8		
E.	1/5				8	2 1/4		
F.	50				9	5	4 3/3	
G.	1	*			10	6 9/10		
					11	6		
					12	900	903	
Problem Solving					13	265,903		
	1				14	17,391		
					15	169,488		
					16	947		
					17	207,088		
					18	1 7/8	1 7	
					19	16 r7	16 7	
Practice					20	21 r35	21 35	
A.	160	161			21	C 15/30	B 7/15	A 4/7
B.	1200	1334			22	22.46		
C.	900	897			23	60		
D.	800	722			24	0		
E.	60	63			25	12:50 pm		
F.	9000	9048						
G.	300	294						
H.	2	2.034			*don't do order of operations (see lesson 21 for comma)			
I.	200	206			percent through book			
J.	3	2.87			49.29			

70 Subtracting a Fraction from a Whole Number Greater Than 1									
Mental Math					Problem set				
see lesson 69					1	59			
see lesson 69... 11/22,12/24					2	4 1/2	4.5		
					3	20			
A.	14				4	21		84	
B.	36				5	900		885	
C.	1 2/5	1 3/5			6	1, 7		1, 2, 7, 14	1, 3, 7, 21
D.	5/6				7	B Diameter			
E.	9/10				8	12,202,500			
F.	20				9	6 2/3			
G.	3	*			10	3 1/2			
					11	4 1/4			
					12	1		8/9 + 1/9 = 9/9	
					13	1 1/4		5 3/4 - 4 2/4	
Problem Solving					14	24,179			
					15	5,454.78			
					16	1.84			
					17	2 2/9		2 2	
					18	47 r11		47 11	
					19	51 r10		51 10	
					20	40,000			
					21	20			
					22	8014			
					23	5/8	62 1/2	62.5	
					24	5/12	5/10	5/8	
Practice					25	60			
A.	3 3/4								
B.	2 1/4								
C.	1 3/4								
D.	1 3/4				*don't do order of operations (see lesson 21 for comma)				
E.	2 1/2				percent through book				
F.	4 1/3				50.00				

71 Decimal Place Value Through Hundredths'							
Mental Math				Problem set			
	see lesson 70			1	370,000		
				2	12.78		
A.	18			3	459	480	
B.	39			4	54		
C.	19			5	3500	3536	
D.	50			6	7/10	70	10-3=7
E.	25			7	3		
F.	100	*		8	B 32.5		
				9	3		
				10	3 1/8		3 1
				11	1, 2, 5, 10		
Problem Solving					1, 2, 4, 5, 10, 20		
	7				1, 2, 3, 5, 6, 10, 15, 30		
				12	10:30 am		
				13	1		
				14	20,647		
				15	165,734		
				16	1753		
				17	26.53		
				18	5.08		
				19	26 r26		26 26
				20	3 1/3		
				21	4	3 3/3	
				22	1/4		
Practice				23	0		
A.	ones			24	Draw		
B.	tens			25	3 3/4		
C.	tenths						
D.	hundredths			*don't do order of operations (see lesson 21 for comma)			
E.	C 42.35						percent through book
F.	A 15.67						50.71

72 Writing Tenths in Decimal Form								
Mental Math				Problem set				
A.	250			1	Draw			
B.	166			2	15	120		
C.	234			3	280			
D.	64			4	9	25		
E.	4 1/3	4 2/3		5	45			
F.	6			6	1500	1502		
G.	3/5			7	1/10	0.1		
H.	8	*		8	0.4			
				9	7/10			
				10	3/8	5/10	2/3	4/4
				11	4	1, 2, 5, 10		
Problem Solving				12	3 3/4		3 3	
	not drawn to scale (just to give you an idea of what it should look like)			13	543			
				14	105			
				15	96,005			
		or		16	1483			
				17	291,232			
				18	659 r1	659 1		
				19	0.84			
Practice				20	168			
A.	0.3			21	9	8 8/8		
B.	1/10			22	1 5/8			
C.	0.4			23	3/4			
D.	2/10			24	5040			
E.	0.5			25	2.37			
F.	7/10							
G.	0.6							
H.	9/10							
I.	7/10	0.7		*don't do order of operations (see lesson 21 for comma)				
J.	3/10	0.3						percent through book
K.	2 3/10	2.3						51.43

73 Naming Points on a Number Line with Decimal Numbers -									
Naming Line Segments									
					Problem set				
Mental Math					1	Draw			
see lesson 70					2	2.13			
					3	520			
A.	260				4	36			
B.	159				5	10			
C.	4				6	24		6	
D.	174				7	7/10		0.7	
E.	3		*		8	70		30	
					9	0.3		1.6	
					10	2 2/5		2 2	
					11	1, 2, 3, 6			
Problem Solving					1, 2, 3, 6, 9, 18				
4.25		11			1, 2, 3, 5, 6, 10, 15, 30				
					12	6053			
					13	12			
					14	9316			
					15	2844.72			
					16	6.09			
					17	2390			
					18	6646 r6		6646 6	
Practice					19	126 r3		126 3	
A.	0.1				20	5			
B.	0.9				21	7			
C.	1.5				22	2/3			
D.	2.2				23	4		= 4	
E.	2.8				24	70			
F.	3.4				25	10			
G.	4.3				*don't do order of operations (see lesson 21 for comma)				
H.	4.7				percent through book				
I.	6		9-3		52.14				

74 Reading a Centimeter Scale to the Nearest Tenth							
Mental Math				Problem set			
A.	376			1	10		
B.	84			2	2750		
C.	123			3	500	482	
D.	109			4	30	5	
E.	$3\frac{1}{5}$	$3\frac{2}{5}$		5	15	30	
F.	3			6	0.6	>	0.444
G.	$\frac{7}{10}$			7	1		
H.	138			8	$\frac{1}{10}$	0.1	10
I.	32			9	1.4		
				10	0.8		
				11	$5\frac{3}{10}$		$5\frac{3}{10}$
Problem Solving				12	5		
	28×9	252		13	75		
	29×8	232		14	173,973		
				15	18,039		
				16	1.43		
				17	938		
				18	386,553		
				19	5600		
				20	$\frac{1}{3}$	$3\frac{2}{3} - 3\frac{1}{3}$	
				21	$\frac{3}{4}$	$4 - 3\frac{1}{4}$	
				22	15,120		
				23	9.93		
				24	6		
Practice (either one)				25	C 9		
A.	1.7	$1\frac{7}{10}$					
B.	3.1	$3\frac{1}{10}$					
C.	3.9	$3\frac{9}{10}$					
D.	4.8	$4\frac{8}{10}$					
E.	6.4	$6\frac{4}{10}$					percent through book
F.	7.2	$7\frac{2}{10}$					52.86

75 Writing Hundredths in Decimal Form							
Mental Math				Problem set			
	see lesson 70			1	12	60	
				2	5		
A.	275			3	5.74		
B.	54			4	360		
C.	8			5	21/100	0.21	
D.	32			6	0.09		
E.	7	*		7	7/10	0.7	70
				8	2.9	29	
				9	3/100		
				10	8 1/10		8 1
				11	6		
Problem Solving				12	3 1/2	3.5	
	Draw			13	200		
				14	910		
				15	756,480		
				16	2100		
				17	872		
				18	52		
				19	0.55		
				20	5 2/3		10 - 4 1/3
				21	4		3 1/4 + 3/4
				22	9600		
				23	15/30	25/50	
				24	3.50		
				25	2.90		
Practice							
A.	9/100			*don't do order of operations (see lesson 21 for comma)			
B.	0.05						percent through book
C.	11/100						53.57

78 Fractions of a Second - Comparing Decimal Numbers									
Mental Math					Problem set				
	see lesson 70				1	900			
					2	2.63			
A.	209				3	20			
B.	164				4	4			
C.	10				5	24 21, 24, 27			
D.	7				6	1, 5 1, 2, 5, 10 1, 3, 5, 15			
E.	11 *				7	>			
					8	5			
					9	7/10 0.7 70			
					10	2.8 or 2 8/10			
					11	9			
Problem Solving					12	2 1/2 2.5			
	8				13	ten and five tenths			
					14	15.12			
					15	468			
					16	75			
					17	521,528			
					18	22,811			
					19	6.50			
					20	1.92			
					21	1.81			
					22	2 2/3 7 - 4 1/3			
					23	7 5 2/3 + 1 1/3 6 3/3			
					24	42			
						Aaron 239, Sammie 197, Bryce 168			
					25	699 other person 95			
Practice									
A.	Mike				*don't do order of operations (see lesson 21 for comma)				
B.	<				percent through book				
C.	2.04		2.21		2.4		55.71		

79 Counting Decimal Places - Writing Equivalent Decimal Numbers

Mental Math

- A. 95
- B. 44
- C. 99
- D. 49

Problem set

- 1 4
- 2 128
- 3 180,000 182,051
- 4 15
- 5 $\frac{2}{3}$ $66\frac{2}{3}$ 66.667
- 6 Draw $12\frac{1}{2}$ 12.5
- 7 $14\frac{2}{7}$ 14 $\frac{2}{7}$
- 8 3
- 9 $\frac{1}{100}$ 0.01 99
- 10 7
- 11 9

Problem Solving

$$\begin{array}{r} \underline{78} \\ x \underline{7} \\ \hline 546 \end{array}$$

- 12 sixteen and twenty-one hundredths
- 13 1.50
- 14 =
- 15 182,051
- 16 153
- 17 1.45
- 18 73,604
- 19 $3\frac{9}{10}$

20 $11\frac{5}{8}$ $9\frac{4}{8} + 2\frac{1}{8}$

- 21 120,000
- 22 3.63

Practice

- A. 1.200
- B. 4.080
- C. 0.500
- D. <
- E. >

- 23 $\frac{2}{3} < \frac{3}{4}$
- 24 55
- 25 Baseball

- F. =
- G. =

percent through book
56.43

80 Writing Money in Two Forms: As Cents and as Dollars										
Mental Math					Problem set					
	see lesson 70				1	8.47				
	13/26	14/28	15/30		2	120	30			
					3	7				
A.	140					Martin 12, sister 6 this year				
B.	190				4	10				
C.	3 1/3				5	607				
D.	33 1/3				6	2	1, 7			
E.	11	*			7	7/15	7/14			
					8	Amy	Alison 30			
					9	2 3/10	2.3			
					10	3				
Problem Solving					11	10.1				
	Draw				12	80				
	1/2 in	2			13	75				
	1/4 in	1			14	=				
	1 in	4			15	11.73				
	total	7			16	1535.04				
					17	29.40				
					18	2.11				
					19	35	¢			
Practice					20	30.40				
A.	2¢	\$0.02			21	0.78				
B.	50¢	\$0.50			22	27/100				
C.	25¢	\$0.25			23	1 3/5	7 - 5 2/5			
D.	9¢	\$0.09			24	B It subtracts 2				
E.	0.60				25	8				
F.	68	¢								
G.	0.20									
H.	92	¢			*don't do order of operations (see lesson 21 for comma)					
I.	4.55								percent through book	
J.	3.60								57.14	

81 Using Fraction Manipulatives, Part 3

Mental Math

- 150
- A. 290
- B. 47
- C. 4200
- D. 6 4 3
- E. 25
- F. 4 *

Problem set

- 1 2.40
- 2 10.00
- 3 28
- 4 160 66 2/3
- 5 500
- 6 twelve and twenty-five hundredths
- 7 6
- 8 1, 2, 4, 8, 16
- 9 10.12
- 10 6
- 11 33 1/3 33 1
- 12 55
- 13 27.58
- 14 7.53
- 15 29.82
- 16 205,500
- 17 5.79
- 18 89
- 19 200
- 20 9 8 8/8
- 21 4 7 3/4 - 3 3/4
- 22 >
- 23 19 3/10
- 24 4 7/8 10 - 5 1/8
- 25 12 2

Problem Solving

- 12 x 12
- 144 CXLIV
- 100+(50-10)+(5-1)

*don't do order of operations (see lesson 21 for comma)

Practice

- A. 5
- percent through book
- 57.86

82 Adding and Subtracting Decimal Numbers, Part 1							
Mental Math				Problem set			
	30			1	14.00	40	
				2	7	brother 18, Cynthia 9	
A.	96			3	74.3	or 1 min	14.3 sec
B.	240			4	1200		
C.	60			5	Draw	25	25
D.	$7\frac{2}{3}$	$8\frac{1}{3}$		6	$\frac{1}{6}$		
E.	8	*		7	2.6		
					two and six tenths		
Problem Solving				8	1, 2, 4		
	D				1, 2, 4, 8, 16		
					1, 2, 4, 5, 10, 20		
	(not drawn to square and need to connect lines to form triangle)			9	8	4	
				10	48		
				11	>		
				12	47.76		
				13	58.32		
				14	50.22		
				15	4.95		
				16	1.72		
				17	0.43		
				18	111,888		
				19	400,000		
				20	329		
				21	$13\frac{1}{2}$		
Practice				22	$10\frac{1}{2}$		
A.	21.4			23	$\frac{98}{99}$		
B.	7.59			24	4		
C.	25.82			25	14		
D.	2.18			*don't do order of operations (see lesson 21 for comma)			
E.	3.77					percent through book	
F.	0.236					58.57	

83 Converting Units of Length

Mental Math

250

A. 119

B. 244

C. 36

D. 5 $4 \frac{3}{3}$

E. $\frac{3}{8}$

F. 120

G. 1 *

Problem set

1 720

2 5.8

3 0.49

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

5 200

6 $\frac{9}{10}$ 0.9

7 eleven and two hundredths

8 108 $\frac{36}{36}$

9 $1 \frac{3}{4}$

10 $8 \frac{3}{4}$

11 0

12 $1 \frac{3}{4}$

13 52.95

14 15.9

15 51.92

16 7.59

17 548

18 694,848

19 181.46

20 $3 \frac{3}{5}$ $3 \frac{3}{5}$

21 2.500

22 6

23 Tyler

24 Garvey

25 Valley

Practice

A. 440 mile = 1760 yds

B. 5 *don't do order of operations (see lesson 21 for comma)

C. 61 percent through book

D. 10,000 1km = 1000m 59.29

84 Changing Improper Fractions to Whole or Mixed Numbers

Mental Math

12 3

A. 266

B. 179

C. 12

D. 12

E. 0 *

Problem set

1 quarter 0.25

2 98

3 C 53.46

4 423

5 8.42

6 1, 2, 3, 5, 6, 10, 15, 30

7 6

8 1 3/10 1.3

9 25

10 880

11 3 1/3

12 >

Problem Solving

100 x15

1500

any improper fraction is going to have a whole number when changed to a mixed number

13 7.9

14 207

15 8.22

Practice

16 212.8

A. 1

17 33.83

B. 2 1/2

18 102.3

C. 1 2/3

19 1.25

D. 2 1/4

20 72

E. 1 1/2

21 296,908

F. 1

22 10 1/3

G. 2

23 0

H. 3 1/3

24 8 9/10

I. 2

25 11:55 am

J. 1 1/3

*don't do order of operations (see lesson 21 for comma)

K. 2 1/3

percent through book

L. 3 3/4

60.00

85 Changing Improper Mixed Numbers to Whole or Mixed Numbers

Mental Math

3 36

A. 199

B. 345

C. $\frac{1}{4}$

D. 60

E. 7 *

Problem set

1 7.29

2 14 42

3 1.35 32.61-31.26

4 4312

5 $\frac{1}{12}$

6 $1\frac{1}{3}$ > $\frac{3}{4}$

7 4.50

8 $1\frac{1}{10}$ 1.1

9 5000

10 3

11 3.7

Problem Solving

$1\frac{1}{2}$

$\frac{6}{8}$

12 1.825

13 246

14 1265.4

15 241,868

16 67

17 6.67

18 25,920

Practice

A. 25

B. 9

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

D. $10\frac{1}{4}$

E. $37\frac{1}{2}$

F. $33\frac{1}{3}$

G. 4

H. 11

I. $1\frac{3}{5}$ $\frac{8}{5}$

J. 25 $24\frac{3}{3}$

K. 1 $\frac{8}{8}$

L. $16\frac{3}{8}$ $15\frac{11}{8}$

19 20.70

20 $1\frac{3}{5}$ $\frac{8}{5}$

21 $1\frac{1}{9}$ $\frac{10}{9}$

22 $33\frac{1}{3}$ $32\frac{4}{3}$

23 48 25

24 19

25 4

*don't do order of operations (see lesson 21 for comma)

percent through book

60.71

86	Multiplying Fractions				Don't reduce fractions (until 98)				
multiply numerators and multiply denominators									
Problem set									
Mental Math			1	south					
10	100		2	19					
			3	2.92					
A.	166		4	1, 2, 3, 6		1, 2, 3, 6		1, 2, 3, 4, 6, 12	
B.	144		5	24		6			
C.	2.50		6	199					
D.	5/12		7	=					
E.	9	*	8	3/8	1/2	2/3	5/5	4/3	
			9	32	16	1/4	16/64	25	
			10	49					
			11	93410.1					
Problem Solving			12	1.613					
			13	144.72					
			14	4.50					
			15	152					
			16	329,846					
			17	5	4 3/3				
			18	3 1/3	2 4/3				
			19	2 3/5					
			20	3/10					
			21	2/9					
			22	6/12					
Practice			23	B It doubles the number					
A.	2/9		24	24					
B.	3/10		25	10					
C.	4/9								
D.	2/4								
E.	3/8	3/4 x 1/2							
F.	1/6	1/2 x 1/3	*don't do order of operations (see lesson 21 for comma)						
G.	4/15	2/5 x 2/3	percent through book						
H.	4/8	1/2 x 4/4	61.43						

88 Identifying Equivalent Fractions				Don't reduce fractions (until 98)			
Mental Math				Problem set			
16	2000			1	1/6	16 2/3	
4000	6000	8000			1/2 girls, 1/3 girls have long hair		
A. 333				2	440		
B. 388				3	79		
C. 2 1/2				4	1000		
D. 0	*			5	8		
				6	B		
				7	C 16/30	15/30 or 16/32	
				8	22	2.2	
				9	1, 2	1, 2, 3, 6	1, 2, 4, 8
				10	25		
Problem Solving				11	2	6/3	
32				12	0	1-1	
				13	14 3/10	13 13/10	
				14	66.347		
				15	26.52		
				16	164		
				17	6.30		
				18	315,750		
				19	58 r10	58	10
				20	19 3/5		19 3
				21	3/8		
				22	9/8	1 1/8	
				23	2/6		
				24	3		
Practice				25	8:07 am		
A.	equivalent fractions						
B.	2/4	3/6	4/3				
C.	TRUE			*don't do order of operations (see lesson 21 for comma)			
D.	=						percent through book
E.	<						62.86

89	Finding Equivalent Fractions by Multiplying by 1				Don't reduce fractions (until 98)				
Mental Math					Problem set				
	100				1	40			
	1000				2	18			
					3	13.95	4.65		
A.	250				4	40.04			
B.	249					forty and four hundredths			
C.	3 1/5				5	3/3			
D.	0.50				6	Draw			
E.	0.5	or 1/2 *			7	1, 3	1, 3, 9	1, 2, 3, 4, 6, 12	
					8	9/12	8/12		
						17/12	1 5/12		
					9	4.9			
Problem Solving					10	7 1/5	6 6/5		
	1 1/2				11	4 3/8	5 - 5/8		
	2				12	9.90			
					13	2.50			
					14	5.76			
					15	18,536.16			
					16	8.37			
					17	305,184			
					18	6265 r4	6265 4		
					19	728			
					20	51 r57	51 57		
					21	1/10			
Practice					22	6/8			
A.	3/3				23	15/20			
B.	2/2				24	D 350			
C.	4/4				25	950			
D.	3								
E.	10				*don't do order of operations (see lesson 21 for comma)				
F.	6							percent through book	
G.	3/6	2/6	5/6					63.57	

90	Identifying Prime Numbers						Don't reduce fractions (until 98)		
Mental Math				Problem set					
	1000			1	1.44	0.08	0.12		
	500			2	500				
				3	1, 2, 4	1, 2, 4, 8	3, 4, 6, 12		
A.	190			4	13,17,19				
B.	194			5	3/3				
C.	5 1/3			6	3/6	4/6			
D.	5				7/6	1 1/6			
E.	0	*		7	2				
				8	3/8	6/12	4/6	5/6	7/7
				9	220				
				10	42				
Problem Solving				11	37.23				
	21	34	55	12	5.105				
	8+13	13+21	21+34	13	11.88				
				14	108.42				
				15	12.72				
				16	93,000				
				17	68 r31	68	31		
				18	52 1/7	52	1		
				19	9/16				
				20	9/4	2 1/4			
				21	42/42				
				22	5 1/3	4 4/3			
				23	4 4/5				
				24	0				
Practice				25	1:10 am				
A.	2,3,5,7 (gives these in the lesson)								
	,11,13,17,19....								
	,23,29....				*don't do order of operations (see lesson 21 for comma)				
	,31,37							percent through book	
	,41,43,47							64.29	

91		Finding Equivalent Fractions by Dividing by 1			Don't reduce fractions (until 98)		
Mental Math				Problem set			
	3			1	37		
	5280			2	0.39		
				3	64		
A.	94			4	6.1		
B.	269			5	8/12	3/12	11/12
C.	30			6	23, 29		
D.	15			7	5/6		
E.	100	*		8	6	3	3/24 or 1/8
				9	60	10	
				10	72	24	
				11	192.10		
Problem Solving				12	4.59		
	Draw			13	338.52		
				14	14.50		
				15	309,228		
				16	60 r38	60 38	
				17	586 6/9	586 6	
				18	3.92		
				19	8		
					5 3/5 +	2 2/5	=7 5/5
				20	1/2		
				21	16/9	1 7/9	
				22	70/70		
				23	9		
				24	195		
Practice				25	60		
A.	2/3						
B.	B 3/8	2/8 = 1/4, 4/8 = 1/2					
C.	1/3			*don't do order of operations (see lesson 21 for comma)			
D.	3/5						percent through book
E.	1/2						65.00

92 Finding the Greatest Common Factor (GCF) of Two Numbers						Don't reduce fractions (until 98)	
Mental Math				Problem set			
	16				1	3.75	
	32				2	200,000	200,772
					3	3752	
A.	197				4	A 4 to 5 feet	
B.	174				5	15.34	
C.	1/2	1/3	1/4	1/5	6	96	
D.	33 1/3				7	B 21	1, 3, 7, 21
E.	15				8	10	2/3
F.	12	*				1, 2, 4, 5, 10, 20	1, 2, 3, 5, 6, 10, 15, 30
					9	9	
					10	3 1/4	
Problem Solving					11	2	10
	4/10				12	1/2	
	2/5				13	1 1/7	8/7
					14	0	2/2
					15	3/3	
					16	1982.2	
					17	7.15	
					18	59.29	
					19	7285 r5	7285 5
					20	88	
Practice					21	153,406	
A.	3	1, 2, 3, 6	1, 3, 9		22	8 1/3	
B.	6	1, 2, 3, 6	1, 2, 3, 4, 6, 12			6 2/3 + 1 2/3	=7 4/3
C.	3	1, 3, 5, 15	1, 3, 7, 21		23	4.66	
D.	2	1, 2, 3, 6	1, 2, 5, 10		24	8	
E.	3	1, 2, 3, 4, 6, 12	1, 3, 5, 15		25	James	60
F.	1	1, 7	1, 2, 5, 10				
G.	2/3	1, 2, 3, 6	1, 3, 9		*don't do order of operations (see lesson 21 for comma)		
H.	1/2	1, 2, 3, 6	1, 2, 3, 4, 6, 12				percent through book
I.	5/7	1, 3, 5, 15	1, 3, 7, 21				65.71

93 Recognizing and Naming Geometric Solids				Don't reduce fractions (until 98)			
Mental Math				Problem set			
	36			1	3:15 pm		
	5280			2	2		
					0.25 + 0.10 + 0.10 + 0.01 + 0.01		
A.	93			3	23,287,420		
B.	47			4	8	16	
C.	1/4	1/2	3/4	5	11, 13, 17, 19		
D.	66 2/3			6	4	1/2	
E.	36	*			1, 2, 4	1, 2, 4, 8	
				7	Cube	6	
				8	Sphere		
				9	1.7		
				10	D Diameter		
Problem Solving				11	15.505		
	Carlos	3 3/4	1/4 longer than Bao's, 1/2 in shorter than	12	786		
	Bao	3 1/2	$3 \frac{3}{4} - \frac{1}{4} = 3 \frac{2}{4}$	13	173,992		
	Sherry	4 1/4	$3 \frac{3}{4} + \frac{2}{4} = 3 \frac{5}{4} = 4 \frac{1}{4}$	14	25		
				15	2.43		
				16	4/12	9/12	
					1 1/12	13/12	
				17	3/4		
				18	9		
				19	4 3/5		
				20	5	4 4/4	
				21	3 3/4		
				22	>		
				23	1 1/2		
Practice				24	14.25		
A.	Rectangular solid			25	5		
B.	Cylinder			*don't do order of operations (see lesson 21 for comma)			
C.	Cone			percent through book			
D.	Rectangular solid			66.43			

94 Using Letters to Name Angles				Don't reduce fractions (until 98)			
Mental Math				Problem set			
	2000			1	Draw	33 1/3	
	1000			2	806		
				3	1000		
A.	293			4	350,000	351,360	
B.	146			5	D 12:10		
C.	1/3	1/2	2/3	6	0.01	0.1	1 1.01
D.	50			7	4	2/3	
E.	25	24 2/2			1, 2, 4, 8	1, 2, 3, 4, 6, 12	
F.	9	*		8	20	60	
				9	3/3		
				10	2/3		
Problem Solving				11	1 3/10	1.3	
	100x20	2000		12	114,700		
	if homeschool - no			13	9.41		
	if school - yes if the average kid weighs 100 lbs and there are 20 students			14	22 r12	22 12	
				15	3.40		
				16	0.68		
				17	6 2/3		
				18	15/16		
				19	Cone		
				20	B PO		
				21	C ∠BOD		
				22	4.88		
				23	1.94		
				24	n/a		
Practice (any answer listed is correct)				25	n/a		
A.	∠MON	∠NOM					
B.	∠LOM	∠MOL					
C.	∠LON	∠NOL		*don't do order of operations (see lesson 21 for comma)			
D.	∠ZYX	∠ZYX	∠Y			percent through book	
E.	∠YZW	∠YZW	∠Z			67.14	

95 Converting Units of Liquid Measure					Don't reduce fractions (until 98)				
Mental Math					Problem set				
	16				1	Draw	60		
	8				2	401			
					3	2.5	25		
A.	259				4	80	4		
B.	248				5	A. BC			
C.	1/5	2/5	3/5	4/5	6	3	2/3		
D.	50					1, 2, 3, 6	1, 3, 9		
E.	100				7	12	24		
F.	100	*			8	3 1/2			
					9	0	0.01	0.1	1
					10	8			
Problem Solving					11	3000			
	Draw				12	16 4/6	16 4		
					13	30.51			
					14	2.414			
					15	160,380			
					16	25			
					17	400 r5	400 5		
					18	0.25			
					19	3/4			
					20	1 1/3	3 - 1 2/3		
					21	6/10	5/10	1 1/10	11/10
					22	11.27			
					23	3			
					24	4 feet 11 inches	Gilbert 5 feet 3 inches		
					25	5 feet 5 inches			
Practice									
A.	Quart								
B.	4				*don't do order of operations (see lesson 21 for comma)				
C.	2000							percent through book	
D.	8							67.86	

98 Reducing Fractions Answers

Mental Math

- 16
- 16
- A. 198
- B. 346
- C. $\frac{1}{4}$ $\frac{5}{6}$ $\frac{3}{4}$
- D. 100 *

Problem set

- 1 $\frac{1}{2}$
- 2 7
- 3 1.13
- 4 10 50
- 5 100
- 6 2
- 7 B Spoke
Rim - Circumference, Hub - central part
- 8 $\frac{2}{6}$ $\frac{1}{2}$ $\frac{5}{6} - \frac{2}{6} = \frac{3}{6}$
- 9 $\frac{3}{4}$ $\frac{6}{8}$ 75
- 10 56 28

Problem Solving

- 12
- 12 A $\angle ABC$
- 13 $\frac{3}{8}$
- 14 3
- 15 4 $\frac{2}{3}$ $\frac{4}{6}$
- 16 $\frac{1}{2}$
- 17 $\frac{3}{4}$ $\frac{6}{8}$
- 18 $3\frac{7}{10}$
- 19 22.95
- 20 40,848
- 21 2.45
- 22 206,380
- 23 0.85
- 24 90 50+40
- 25 2:40 pm

Practice

- A. $\frac{2}{3}$ $\frac{6}{9}$ *don't do order of operations (see lesson 21 for comma)
- B. $\frac{1}{2}$ $\frac{4}{8}$ percent through book
- C. $\frac{5}{6}$ $\frac{10}{12}$ 70.00

99 Reducing Mixed Numbers									
Mental Math				Problem set					
	16			1	1826				
	2	32		2	500				
				3	C 20	4,8,12,16,20		5,10,15,20	
A.	218			4	0	0.5	1	1.1	3/2 (1 1/2)
B.	349			5	2	6			
C.	1/3	1/2	2/3	6	1,354,760				
D.	7	*		7	3/6	5/6 - 3/6	1/3	2/6	
				8	1/3	3/9	33.33		
				9	Rectangular solid			6	
				10	3.1	31			
				11	1 1/5	6/5			
Problem Solving				12	1 1/5	6/5			
	6			13	2 1/2	1 2/4			
				14	2 2/3	2 4/6			
				15	81,592				
				16	6.95				
				17	7560				
				18	61.50				
Practice				19	69				
A.	1 1/4			20	69				
B.	2 2/3			21	5	10/2			
C.	2 1/2			22	3/8	6/16			
D.	3 1/2			23	37 r1		37 1		
E.	3 2/3			24	8				
F.	4 1/4			25	37				
G.	2 1/2	2 2/4							
H.	6 2/5	6 4/10							
I.	5 4/5	5 8/10							
J.	3 3/4	3 6/8							*don't do order of operations (see lesson 21 for comma)
K.	4 1/2	4 4/8							percent through book
L.	5 1/3	5 4/12							70.71

100	Reducing Fractions to Lowest Terms						
Mental Math				Problem set			
	1000			1	0		
	quart			2	$9 \times 10 = 90$		
				3	$\frac{5}{10}$	$\frac{6}{10}$	
A.	45				$1 \frac{1}{10}$	$\frac{11}{10}$	
B.	219			4	4312		
C.	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{4}$	5	4	24	
				6	19.1		
				7	0.5	$\frac{1}{2}$	50
				8	Sphere		
				9	B. CD		
				10	$1 \frac{2}{3}$	$\frac{5}{3}$	$\frac{10}{6}$
Problem Solving				11	$1 \frac{2}{3}$	$\frac{5}{3}$	$\frac{10}{6}$
	Draw			12	4	$\frac{20}{5}$	
				13	$\frac{2}{3}$	$\frac{8}{12}$	
				14	3	$6 \frac{2}{3} - 3 \frac{2}{3}$	
				15	$\frac{1}{2}$	$\frac{6}{12}$	
				16	25,314.42		
				17	76		
				18	192,852		
				19	45		
				20	48		
Practice				21	48		
A.	$\frac{1}{3}$			22	3	$2 \frac{1}{4}$	$\frac{9}{4}$
B.	$\frac{1}{3}$			23	$\frac{20}{20}$		
C.	$\frac{2}{3}$			24	195		
D.	$\frac{1}{4}$			25	205		
E.	$\frac{3}{4}$						
F.	$\frac{2}{5}$						
G.	$\frac{1}{2}$	$\frac{8}{16}$					
H.	$\frac{3}{5}$	$\frac{12}{20}$					percent through book
I.	$\frac{3}{4}$	$\frac{18}{24}$					71.43

101 Converting and Reducing Improper Fractions							
Mental Math				Problem set			
				1	60	6	
				2	7.50	5	
A.	2007	Monday		3	154,343,515		
	2008	Tuesday		4	4	20	
	2009	Thursday		5	6/8	6/8 + 5/8	
	2010	Friday			1 3/8	11/8	
	2011	Saturday		6	1 1/3	1 2/6	
	2012	Sunday		7	C RT		
	2013	Tuesday		8	1	=	1
	2014	Wednesday		9	Cylinder		
	2015	Thursday		10	6.8		
				11	3 1/2	2 6/4	
				12	4 1/2	4 4/8	
				13	1 1/8	9/8	
				14	8.40		
				15	21.60		
				16	307,840		
				17	26,861		
				18	120		
Practice				19	120		
A.	1 1/2	1 2/4		20	2.4		
B.	1 2/3	1 4/6		21	1 2/3	10/6	1 2/3
C.	3 1/3	3 2/6		22	2		
D.	5 1/2	5 2/4		23	4		
E.	2 1/2	2 2/4		24	B It multiplies by 3		
F.	1 1/2	1 4/8		25	36		
G.	5 3/4	5 6/8					
H.	2 1/4	2 2/8					
I.	3 2/3	2 10/6	3 4/6				
J.	7 1/2	6 6/4	7 2/4				percent through book
K.	2 1/2	15/6	2 3/6				72.14

102 Dividing by Two-Digit Numbers, Part 1							
Mental Math				Problem set			
				1	Draw		
				2	150	2.5	
A.	$\frac{3}{4}$	$\frac{2}{3}$	$\frac{1}{2}$	3	3.9		
B.	500			4	36	12	
C.	1000			5	70		
D.	$33\frac{1}{3}$			6	3	12	
E.	111	*		7	pyramid		
				8	0.5	$\frac{1}{2}$	50
						$\frac{50}{100}$	
				9	D 0.05		
				10	80	20	
Problem Solving				11	1,584.695		
	362	123		12	1816		
	239	CCXXXIX		13	515,840		
		239		14	1000		
				15	37 r6		37 6
				16	22 r7		22 7
				17	21 r6		21 6
				18	$5\frac{1}{2}$	$4\frac{12}{8}$	
				19	$3\frac{3}{5}$		
				20	$1\frac{2}{3}$	$\frac{5}{3}$	
				21	1	$\frac{12}{12}$	
				22	3		
Practice				23	$\frac{4}{10}$	$\frac{4}{10} + \frac{1}{10}$	
A.	23	23 0			$\frac{1}{2}$	$\frac{5}{10}$	
B.	12 r1	12 1		24	8.64		
C.	13	13 0		25	2.88		
D.	21 r1	21 1					
E.	25	25 0					*don't do order of operations (see lesson 21 for comma)
F.	22 r4	22 4					percent through book
G.	12	12 0					72.86

103 Dividing by Two-Digit Numbers, Part 2							
Mental Math				Problem set			
				1	4		
				2	3.40	0.85	
A.	1/4	1/3	1/2	3	150		
B.	144			4	0.5	1/2	50
C.	296					5/10	
D.	50			5	5	15	
E.	5			6	12-9=3		
F.	0.50			7	2	=	2
G.	4	*		8	B 17	6	17
				9	Cube		
				10	D \angle AOC		
Problem Solving				11	4 2/5	3 7/5	
	64			12	4 1/2	4 4/8	
				13	5		
				14	8		
				15	2/5	40/100	
				16	2		
				17	3234		
				18	2.69		
				19	5.60		
				20	421,200		
Practice				21	31 r9	31	9
A.	22 r22	22	22	22	43 r1	43	1
B.	22 r5	22	5	23	9/12	2/12	11/12
C.	20 r20	20	20	24	3		
D.	42	42	0	25	10	2	
E.	34 r2	34	2				
F.	6	6	0				
G.	31 r3	31	3	*don't do order of operations (see lesson 21 for comma)			
H.	22 r8	22	8				percent through book
I.	61 r9	61	9				73.57

104 Dividing by Two-Digit Numbers, Part 3							
Mental Math				Problem set			
				1	11,31,41		
				2	192		
A.	1/2	1/3	1/4	3	1320		
B.	5			4	4.9		
C.	10			5	19		
D.	7.5			6	1/10	10	40
E.	0	*		7	B 786 ÷ 19		
				8	4	3	
				9	Cone		
				10	B Right		
				11	70.82		
Problem Solving				12	919		
	3	(4 qts in gallon)		13	24.36		
	6	(8 pints in gallon)		14	277,032		
				15	41 r7	41	7
				16	30 r20	30	20
				17	31 r22	31	22
				18	2 1/2	5/2	15/18
				19	2 1/2		
					5/2	15/6	2 3/6
				20	1		
Practice				21	1 1/4	3 - 1 3/4	
A.	41 r13	41	13	22	1/4	3/12	
B.	20	20	0	23	8/12	11/12 - 8/12	
C.	4 r5	4	5		1/4	3/12	
D.	31 r1	31	1	24	7		
E.	17 r13	17	13	25	twelfth	60	
F.	41 r21	41	21				
G.	32	32	0	*don't do order of operations (see lesson 21 for comma)			
H.	43 r8	43	8			percent through book	
I.	30 r30	30	30			74.29	

105	Writing the Reciprocal of a Fraction							
Mental Math				Problem set				
					1	37	111	
					2	19		
A.	2 1/2	5/2			3	0.25	1/4	25
B.	260						25/100	
C.	199				4	1	(2/3)*(3/2)	6/6
D.	3				5	1/4	4	20
E.	6				6	4/3	1	12/12
F.	9				7	B 500 ÷ 25		
					8	1/6	4/1 or 4	
					9	C ∠KNL		
					10	1.91		
Problem Solving					11	27.50		
	Draw				12	49,979		
	lines of symmetry				13	15,120		
	X & + in the square will give you 4				14	4 r16	4	16
					15	21		
					16	3/5		
					17	3 2/3	2 10/6	3 4/6
Practice					18	3 2/3	3 4/6	
A.	5/4				19	9		
B.	5/6				20	2 2/5	12/5	
C.	1/3				21	9		
D.	8/7				22	9/12	2/12	9/12-2/12
E.	8/3					7/12		
F.	1/5				23	12 3/10	12	3
G.	10/3				24	14		
H.	12/5				25	12		
I.	1/2							
J.	5/1							
K.	1/10							percent through book
L.	1/1							75.00

106	Dividing Fractions, Part 2							
Mental Math				Problem set				
				1	Draw			
				2	$\frac{1}{4}$	25		
A.	$1\frac{2}{3}$			3	8			
B.	$\frac{6}{5}$			4	350,000		348,880	
C.	3			5	93,814,200			
D.	6			6	$B\ 3 \div \frac{1}{10}$			
E.	9			7	$\frac{5}{20}$	$\frac{4}{20}$	$\frac{9}{20}$	
				8	10	30		
				9	3, 6, 9, 12			
				10	12	9		
				11	3			
Problem Solving				12	0.75	$\frac{3}{4}$	75	
	Red			13	$1\frac{1}{3}$			
	Red	34		14	$\frac{3}{4}$			
	White	33		15	6			
	Blue	33		16	1684.734			
	total	100		17	22,646			
				18	675,840			
				19	9.40			
				20	37 r13		37	13
				21	14 r7		14	7
Practice				22	5.04			
A.	$\frac{2}{3}$			23	$\frac{10}{10}$			
B.	$\frac{8}{9}$			24	$1\frac{3}{4}$	$5 - 3\frac{1}{4}$		
C.	$2\frac{2}{3}$			25	$1\frac{2}{3}$	$1\frac{2}{6}$		
D.	$1\frac{1}{2}$							
E.	$1\frac{1}{8}$							
F.	4							
G.	6							
H.	$4\frac{1}{2}$						percent through book	
I.	12						75.71	

107 Ratios														
Mental Math								Problem set						
								1	$3/2$	$15/10$				
								2	$1/4 + 1/4 = 1/2$					
A.	$1 \frac{1}{6}$	$1 \frac{1}{3}$	$1 \frac{1}{2}$					3	2.5	5				
B.	3	$3/1$						4	4					
C.	$33 \frac{1}{3}$							5	2.5	$2 \frac{1}{2}$	$2 \frac{5}{10}$			
D.	$66 \frac{2}{3}$							6	0.99					
E.	$66 \frac{2}{3}$							7	$1/4$	4	16			
F.	7	*						8	$10/15$	$6/15$	$4/15$			
								9	0.5	$1/2$	$5/10$			
								10	$1/4$	<	4			
								11	20					
Problem Solving								12	$4 \frac{1}{2}$					
	44	55	66					13	$2/9$					
	165	CLXV	165					14	$1 \frac{2}{5}$	$7/5$	$14/10$			
								15	20,812					
								16	1.09					
								17	4.32					
								18	103,680		$17280 * 6$			
								19	20 r20		20 20			
								20	102					
								21	$4 \frac{1}{2}$	$5 \frac{3}{4} - 1 \frac{1}{4}$				
									$1 \frac{1}{4}$	$4 \frac{2}{4}$				
								22	5	$4 \frac{4}{4}$				
								23	30					
								24	$1/2$					
								25	5					
								*don't do order of operations (see lesson 21 for comma)						
Practice											percent through book			
A.	$2/3$	20/30										76.43		

108	Adding and Subtracitng Decimal Numbers, Part 2						
Mental Math				Problem set			
				1	$\frac{3}{2}$	$\frac{12}{8}$	
				2	pyramid		
A.	$1\frac{1}{2}$	$1\frac{3}{4}$	2		5	4 triangles, 1 square	
B.	$\frac{4}{3}$	4	$\frac{4}{1}$	3	2.4		
C.	10			4	16	15	
D.	5			5	B		
E.	10			6	4, 8, 12, 16		
F.	8	*		7	$\angle C \cong \angle KNM$		
				8	9.845		
				9	28.16		
				10	22.25		
Problem Solving				11	0.267		
	36			12	8.75		
				13	45,600		
				14	$22r12$	22	12
				15	0.36		
				16	5	$4\frac{2}{2}$	
				17	$1\frac{1}{15}$		
				18	$4\frac{2}{3}$		
				19	$\frac{5}{7}$		
Practice				20	20	$\frac{100}{5}$	
A.	22.27			21	$1\frac{1}{8}$		
B.	0.15			22	70		
C.	0.948			23	$\frac{3}{10}$		
D.	0.336			24	79		
E.	8.98			25	89		
F.	2.55						
G.	10.98						
H.	16.98			*don't do order of operations (see lesson 21 for comma)			
I.	48.95						percent through book
J.	0.625						77.14

109	Adding Whole Numbers and Decimal Numbers						
Mental Math				Problem set			
				1	$\frac{5}{6}$	$\frac{50}{60}$	
				2	$\frac{1}{3}$	$\frac{2}{6}$	$33 \frac{1}{3}$
A.	$1 \frac{1}{4}$	$1 \frac{3}{8}$	$1 \frac{1}{2}$	3	2.40	0.20	
B.	2	$\frac{2}{1}$	$\frac{1}{2}$	4	13.9		
C.	$12 \frac{1}{2}$			5	3.5	$3 \frac{1}{2}$	
D.	$37 \frac{1}{2}$			6	2		
E.	$37 \frac{1}{2}$			7	1,620.3		
F.	8	*		8	16	16	
				9	$\frac{6}{8}$	$\frac{7}{8} - \frac{6}{8}$	$\frac{1}{8}$
				10	8.0 or 08		
				11	54		
Problem Solving				12	8.4		
	16			13	0.25		
	1	cup		14	3.76		
				15	202,640		
				16	34		
				17	2.03		
				18	$6 \frac{1}{2}$	$6 \frac{4}{8}$	
				19	$3 \frac{2}{5}$	$5 - 1 \frac{3}{5}$	$1 \frac{3}{5}$
				20	$\frac{1}{4}$		
				21	$\frac{1}{4}$		
				22	90		
Practice				23	$\frac{1}{5}$		
A.	6.3			24	C It subtracts 6		
B.	13.2			25	0		
C.	30.4						
D.	5.9						
E.	7.95						
F.	131.4			*don't do order of operations (see lesson 21 for comma)			
G.	24.8						percent through book
H.	25.8						77.86

110	Simplifying Decimal Numbers							
Mental Math				Problem set				
					1	3/1	60/20	
					2	12.50		
A.	1 1/2	2	2 1/2		3	21	75	
B.	1/3	5/3			4	10	6	
C.	25				5	7		
D.	2 1/2				6	C		
E.	0.25				7	10/12	9/12	1/12
					8	500		
					9	80	20	
					10	13.45		
					11	416.82		
Problem Solving					12	0.37		
	A	line of symmetry is			13	118,404		
	B				14	17.50		
	C				15	1.75		
	D				16	26		
	E				17	52		
					18	1 2/3	15/9	5/3
					19	81/100		
					20	8/9		
					21	4		
					22	2		
					23	2/5	4/10	
Practice					24	30		
A.	3.2				25	8		
B.	0.32							
C.	32							
D.	3.02							
E.	10							
F.	3.7							percent through book
G.	1.05							78.57

111 Rounding Mixed Numbers to the Nearest Whole Number										
Mental Math					Problem set					
	30+20					1	3/2	60/40		
						2	2	200		
A.	3 1/3	2 1/2	2			3	1776			
B.	2	*				4	75			
						5	30	3		
						6	1 1/2			
						7	9			
						8	11	11 1/8		
						9	80			
						10	110	30	20	
						11	63.96			
Problem Solving						12	4.37			
	4 weeks +2 days		Mon -> Wednesday			13	35.80			
	7 weeks +1 day		Sat -> Sunday			14	283,176			
	11 weeks + 1 day		Tues -> Wednesday			15	172			
						16	1.44			
						17	2.88			
						18	10/12	3/12	7/12	
						19	8 1/5	7 6/5		
						20	7 2/3	7 4/6		
						21	1/10	10/100		
						22	2 1/2	5/2	10/4	
Practice						23	18			
A.	4					24	28.2			
B.	7					25	8			
C.	7									
D.	6									
E.	13									
F.	25						*don't do order of operations (see lesson 21 for comma)			
G.	50	52 1/4					percent through book			
H.	48	47 21/40					79.29			

112 Subtracting: Fill Empty Places with Zero							
Mental Math				Problem set			
	7+5			1	Draw	\	/
	16	32		2	8	actual is 8.34 lbs according to Google	
				3	11		
A.	2/3	1 1/3	1 1/2	4	35	70	
B.	1	*		5	4		
				6	0.1	1/10	10
				7	8/40	35/40	1 3/40
				8	0.1	=	0.10
				9	6, 12, 18, 24		
				10	4	12	
				11	105	30	15
Problem Solving				12	0.28		
	24	12		13	5.49		
	288	CCLXXXVIII		14	9102		
		288		15	39.24		
				16	421,200		
				17	72		
				18	72		
				19	1 2/3	5 - 3 1/3	
				20	1	30/30	
Practice				21	6		
A.	0.15			22	1/6		
B.	0.05			23	24		
C.	3.78			24	24		
D.	3.15			25	0.375	0.375	
E.	0.277				"3/8	"9/24	
F.	0.079						
G.	4.5						
H.	0.9			*don't do order of operations (see lesson 21 for comma)			
I.	0.75					percent through book	
J.	1.077					80.00	

113	Subtracting: Pin Decimal Point on Whole Number							
Mental Math				Problem set				
	8x6			1	3/5	15/25		
	36	3600		2	4	33 1/3		
				3	South			
A.	3/4	1 1/8	1 1/2	4	1.5	1 1/2	1 5/10	
B.	11	*		5	1			
				6	60			
				7	2			
				8	13			
				9	D			
				10	12	9		
				11	4	2		
Problem Solving				12	0.65			
	8			13	5.94			
				14	31.95			
				15	118,440			
				16	3.4			
				17	2.35			
				18	252			
				19	132			
				20	5	3 2/3 + 1 1/3		
Practice				21	1/2			
A.	2.88			22	5/7			
B.	2.7			23	2 1/4	9/4		
C.	2.2			24	1/5	20/100		
D.	1.8			25	4			
E.	3.5							
F.	2.5							
G.	0.1							
H.	0.9			*don't do order of operations (see lesson 21 for comma)				
I.	0.75					percent through book		
J.	1.5					80.71		

114 Rounding Dollars and Cents to the Nearest Dollar

Mental Math

Divide 10 by 2

- A. 24 166 190 CXC
- B. $1 \frac{1}{5}$ $1 \frac{1}{2}$ $2 \frac{1}{2}$

Problem set

- 1 Draw (square/rectangle)
- 2 9 27 $\frac{2}{1}$ $\frac{18}{9}$
- 3 75,80,80,80,85,90,90
- 80 80
- 4 $\frac{1}{2} \times \frac{1}{3} = \frac{1}{6}$
- 5 7
- 6 $1 \frac{1}{2} >$ $\frac{2}{3}$
- 7 Draw
- 8 4
- 9 10 10
- 10 7,14,21,28,35

Problem Solving

- 64
- 125

- 11 A
- 12 12 8
- 13 13.27
- 14 1.71
- 15 56.40
- 16 260,592
- 17 37 37
- 37 37
- 18 $\frac{6}{9}$ $\frac{6}{9} + \frac{7}{9}$
- $\frac{13}{9}$ $1 \frac{4}{9}$
- 19 $8 \frac{1}{3}$ $5 \frac{2}{3} + 2 \frac{2}{3}$
- $7 \frac{4}{3}$

Practice

- A. 6
- B. 15
- C. 119
- D. 10
- E. 31
- F. 198
- G. 20 19.84

- 20 $\frac{1}{3}$
- 21 9
- 22 16
- 23 A G4
- 24 Grant
- 25 K2
- percent through book
- 81.43

115 Rounding Decimal Numbers to the Nearest Whole Number

Mental Math

8×7

A. 4

B. 8

C. 16

D. 7 *

Problem set

1 50

2 10

3 1

$0.25 + 0.1 + 0.05 + 0.01 + 0.01 + 0.01$

4 10.23

5 40

6 $\frac{5}{10}$ $\frac{9}{10} - \frac{5}{10}$

$\frac{2}{5}$ $\frac{4}{10}$

7 75 225

8 19

9 3 3.028

Problem Solving

XYZ lines of symmetry

Z

Y |

X +

11 $\angle DAB$

12 $\frac{1}{10}$ $\frac{10}{100}$

13 $\frac{1}{2}$ $\frac{5}{10}$ $\frac{50}{100}$

14 $\frac{1}{4}$ $\frac{25}{100}$

15 $\frac{4}{5}$ $\frac{12}{15}$

16 1358.32

17 10.75

18 5.04

19 594,960

20 213

21 426

Practice

A. 5

B. 12

C. 96

D. 7

E. 46

*don't do order of operations (see lesson 21 for comma)

F. 90

percent through book

G. 70 68.306

82.14

116	Decimal Place Value: Thousandths							
Mental Math					Problem set			
	50x30				1	24	4.167	
	2000	4000	1000		2	152		
					3	1.5	1 1/2	
A.	33 1/3				4	64	63.86611	
B.	66 2/3				5	8,16,24,32,40		
C.	64	*			6	18		
						12		
						2/3	12/18	
					7	26	25.98	
					8	*		
					9	16	16	
Problem Solving					10	3495		
	0.5	one roll of pennies			11	5 3/4	5 6/8	
	2	one roll of nickels			12	4		
	8	rolls of pennies =2 rolls of nickels			13	2 7/10		
					14	1649.395		
					15	2.7		
					16	114,000		
8	five and three hundred seventy-five thousandths				17	36.25		
					18	3.25		
					19	20 r16	20 16	
					20	315		
					21	1 1/2	1 5/10	15/10
					22	7 1/2	15/2	
Practice					23	4/24	3/24	7/24
A.	six and eight hundred seventy-five thousandths				24	5	16 2/3	
					25	C Blond and Black		
B.	0.125							
C.	4				*don't do order of operations (see lesson 21 for comma)			
D.	3						percent through book	
E.	1						82.86	

117 Using Percent to Name Part of a Group							
Mental Math				Problem set			
	10 x 1.50			1	70	66 21/32	
	4	16	2	2	62.8		
				3	16 r5	16 5	
A.	20			4	56	55.84	
B.	10			5	30		
C.	4			6	2/10	=	0.2
				7	5	5.110	
				8	20		
				9	2/6	2/6 + 1/6	
					3/6	1/2	
				10	16	15	
Problem Solving				11	3		
	144	6		12	3/5	6/10	60/100
	24	XXIV	24	13	1 3/10	13/10	
				14	1506.39		
				15	1.3		
				16	36.50		
				17	270,972		
				18	3.65		
				19	1753		
				20	25		
				21	2 2/5	12/5	
				22	6 2/3	20/3	
				23	12		
Practice				24	1/4	32	8/32
A.	60			25	8		
B.	20						
C.	20						
D.	24						
E.	60						percent through book
F.	50						83.57

118 Writing a Percent as a Fraction								
Mental Math				Problem set				
	11 x 1.5			1	45,454,500			
	100	10000		2	4.23			
				3	5			
A.	20			4	9	5		
B.	60			5	320			
C.	1/4			6	60	15/25 x 4/4 = 60/100		
					3/2	10	15/10	
				7	21	20.867		
				8	2/5	4/10	40/100	
				9	=			
				10	*	3		
Problem Solving				11	26	42		
	27			12	96	24		
				13	600.737			
*				14	1.65			
10	seventy-six and three hundred forty-five thousandths			15	2.52			
				16	706,680			
				17	3/6	3/6 + 1/6		
					2/3	4/6		
				18	3/4			
				19	2.47			
				20	9/11			
				21	4 4/7			
				22	20	24		
				23	17			
Practice				24	1	24		
A.	3/5	6/10	60/100	25	18			
B.	9/10	90/100		20,20,20,20,19,19,19,19,18,18,18,18,18,18,17,17,17,17,17,17,16,16,16,15,15,?				
C.	1/4	3/10	25/100					percent through book
D.	2/50	4/100						84.29

119 Multiplying Decimal Numbers							
Mental Math				Problem set			
	300/10				1	**	
					2	80	$40/50 \times 2/2 = 80/100$
A.	399				3	$1/100 =$	0/10
B.	144				4	11:25 pm	
C.	10				5	101.101	
D.	30				6	200	600
E.	20				7	10,20,30,40,50	
F.	9	*			8	16	16.13
					9	22	30
					10	$1/10$	$10/100$
						$1/5$	$2/10$
Problem Solving					11	1090.732	
	60	in min	60×1		12	0.44	
	3600	in hour	60×60		13	7.20	
	86400	in day	3600×24		14	0.135	
					15	1.60	
	**				16	285	
	+ - Line up the decimal points				17	1.46	
	x multiply. then count decimal places.				18	35	
	Place a decimal point on whole numbers. Fill empty places with zero.				19	$2 \frac{4}{5}$	
					20	$5 \frac{1}{2}$	$5 \frac{5}{10}$
					21	$3 \frac{1}{10}$	
Practice					22	$4/6$ and $3/6$	$1/6$
A.	1.2				23	$1/10$	$3/30$
B.	1.8				24	$1 \frac{1}{4}$	$5/4$ $15/12$
C.	0.48				25	$1/10$	$3/30$
D.	0.98						
E.	0.15						
F.	3.6			*don't do order of operations (see lesson 21 for comma)			
G.	0.75						percent through book
H.	0.225						85.00

122 Finding the Least Common Multiple of Two Numbers									
Mental Math					Problem set				
	100x3				1	8000			
	16	32	8		2	120			
					3	22.50			
A.	3				4	4			
B.	9				5	Draw			
C.	27				6	12 1/2			
D.	12	*			7	25	0.25	1/4	
					8	Cylinder			
Problem Solving					9	1.5	or 1 1/2		
	first	4			10	18		6,12,18,24,30	
	second	2						9,18,27,36,45	
	third	1			11	30			
	fourth	0.5	1/2		12	2.0			
	fifth	0.25	1/4		13	1783.505			
					14	0.91			
					15	14.4			
Practice					16	0.075			
A.	6		2,4,6,8		17	1.25			
			3,6,9,12		18	75			
B.	15		3,6,9,12,15		19	75			
			5,10,15,20,25		20	132			
C.	10		5,10,15		21	7 1/7	3 3/7 +	3 5/7	
			10,20,30			6 8/7			
D.	4		2,4,6,8		22	0	1 1/2 -	3/2	
			4,8,12		23	3/12 & 8/12		8/12 - 3/12	
E.	6		3,6,9,12			5/12			
			6,12,18		24	Triangle			
F.	30		6,12,18,24,30		25	F2			
			10,20,30,40,50						
G.	40		8,16,24,32,40					percent through book	
			10,20,30,40,50					87.14	

*don't do order of operations (see lesson 21 for comma)

123 Writing Mixed Numbers as Improper Fractions									
Mental Math					Problem set				
	10x1.50				1	280			
					2	120,000			117,924
A.	2/3	3/4	1 1/4		3	10	10		
B.	3				4	18			
C.	9.5	or 9 1/2			5	3/2	1 1/2		
D.	9				6	4			
E.	6	*			7	1/4	25		
					8	Rectangular solid			6
					9	12	6,12,18,24,30 4,8,12,16,20,24		
					10	5 1/3	5 2/6		
Problem Solving					11	1161.924			
	60				12	6.625			
					13	2.96			
					14	12.5			
					15	0.0128			
					16	24			
					17	26 r3	26 3		
					18	3.54			
					19	7 7/10			
					20	5 3/4	5 6/8		
					21	2 7/10			
					22	3 1/3	10/3	20/6	
Practice					23	3/16			
A.	7/4	1 3/4			24	3/4	6/8		
B.	7/2	3 1/2			25	2/12 & 3/12			
C.	8/3	2 2/3				5/12	2/12 + 3/12		
D.	9/2								
E.	5/3				*don't do order of operations (see lesson 21 for comma)				
F.	11/4					percent through book			
G.	25/8					87.86			

125	Calculating Area of Rectangles						
Mental Math				Problem set			
	20	20		1	20	4	
	16	40		2	$5/2$	$2\ 1/2$	
				3	$1/2$	$2/4$	
A.	20			4	$1/4$		
B.	40			5	$7\ 3/5$		
C.	60			6	1:10 pm		
				7	C $1/4$, $3/4$		
				8	15	5,10,15,20,25,30	
						3,6,9,12,15	
				9	14		
				10	12		
Problem Solving				11	116.505		
	CDEHIKOX			12	0.82		
	-- line of symmetry				eighty-two hundredths		
				13	3.75		
				14	0.0084		
				15	70.2		
				16	78		
				17	130		
				18	1252 r1	1252 1	
				19	$2\ 2/3$	$2\ 4/6$	$1\ 10/6$
				20	$1/2$	$4/8$	
				21	$8/15$		
				22	$1\ 1/5$	$6/5$	$12/10$
				23	6	10	
				24	$1\ 1/15$	$16/15$	
Practice				25	2.50	or. $2\ 1/2$	
A.	12						
B.	9						
C.	10						percent through book
D.	2						89.29

126	Probability and Chance							
Mental Math				Problem set				
	36	24			1	$1/6$	16.667	
					2	40		
A.	$1 \frac{1}{6}$	$1 \frac{1}{4}$	$1 \frac{1}{3}$		3	35	3.50	
B.	5				4	16		
C.	10				5	16		
D.	15				6	5		
					7	4	4.053	
					8	$1/100$	1	
					9	$11/6$		
					10	1.1	1.01	
					11	34.36		
Problem Solving					12	4.5	25 - 20.5	
	0.5	1			13	2.52		
	2	4			14	0.091		
	5	10			15	47.5		
	10	20	35		16	1.46		
					17	250 r1	250 1	
					18	199		
					19	$8 \frac{1}{3}$	$8 \frac{4}{12}$	$7 \frac{16}{12}$
					20	$2 \frac{8}{9}$		
					21	$2 \frac{1}{4}$	$2 \frac{2}{8}$	$18/8$
					22	$1 \frac{1}{2}$	$1 \frac{2}{4}$	$6/4$
					23	$12/20$ & $15/20$	$3/20$	
					24	15		
					25	5	1	
Practice								
A.	$1/5$							
B.	20							
C.	$2/5$							
D.	60							percent through book
E.	not rain							90.00

127	Adding and Subtracting Fractions, Part 2						
Mental Math				Problem set			
	20	24		1	Draw	83 1/3	
	60	150		2	26		
				3	25	3/4	
A.	30			4	D		
B.	3			5	7:00am	24 hours back to 6am, then 1 more hour	
C.	0.30						
D.	9	*		6	9/4	2 1/4	
				7	3/5	60/100	6/10
				8	20		
				9	20		
				10	90	30	20
Problem Solving				11	3/8	2/8+1/8	
	24			12	1/4	3/4-2/4	
	480			13	1/8	7/8-6/8	
	960			14	1 4/5	9/5	
				15	1/5	3/15	
				16	5		
				17	186.455		
				18	38.36	42 - 3.64	
						thirty-eight and thirty-six hundredths	
				19	650		
Practice				20	36.8		
A.	5/8	4/8+1/8		21	0.072		
B.	1/4	2/4-1/4		22	1.32		
C.	7/8	6/8+1/8		23	1.10		
D.	5/9	6/9-1/9		24	35		
E.	2/3	4/6	1/6+3/6	25	∠CDA OR ∠ADC		
F.	1/8	5/8-4/8		*don't do order of operations (see lesson 21 for comma)			
G.	5/6	1/6+4/6				percent through book	
H.	1/6	5/6-4/6				90.71	

128 Adding and Subtracting Mixed Numbers, Part 2									
Mental Math					Problem set				
	48				1	7	28		
	4	48			2	84	84.21		
					3	3:27 pm			
A.	$\frac{2}{3}$	$\frac{3}{4}$	$\frac{5}{6}$		4	9	36		
B.	8				5	20	$\frac{10}{50} \times \frac{2}{2} = \frac{20}{100}$		
C.	9					$\frac{1}{4}$	$\frac{10}{40}$		
D.	10				6	$\frac{4}{5}$	$\frac{8}{10}$	$\frac{80}{100}$	
						$\frac{9}{10}$	$\frac{90}{100}$		
					7	1460	1461 if counting the leap year		
					8	$11\frac{1}{4}$			
					9	10	6		
Problem Solving					10	92	28	44	
	24				11	$3\frac{3}{4}$	$2\frac{2}{4} + 1\frac{1}{4}$		
					12	$4\frac{9}{10}$	$3\frac{7}{10} + 1\frac{2}{10}$		
					13	$3\frac{3}{8}$	$4\frac{5}{8} - 1\frac{2}{8}$		
					14	$5\frac{1}{3}$	$5\frac{2}{6}$	$6\frac{3}{6} - 1\frac{1}{6}$	
					15	63.32			
					16	22.1			
					17	36.5			
					18	0.0810			
					19	0.1161			
					20	170			
Practice					21	76			
A.	$5\frac{3}{4}$	$3\frac{1}{4} + 2\frac{2}{4}$			22	$4\frac{1}{2}$	$4\frac{2}{4}$	$18\frac{1}{4}$	
B.	$7\frac{5}{8}$	$2\frac{1}{8} + 5\frac{4}{8}$			23	8			
C.	$2\frac{1}{3}$	$2\frac{2}{6}$	$3\frac{3}{6} - 1\frac{1}{6}$		24	2.6			
D.	$\frac{1}{4}$	$2\frac{3}{4} - 2\frac{2}{4}$			25	0.30	9.70		
E.	$6\frac{7}{8}$	$5\frac{5}{8} + 1\frac{2}{8}$							
F.	$4\frac{1}{2}$	$4\frac{5}{10}$	$3\frac{3}{10} + 1\frac{2}{10}$						
G.	$3\frac{3}{8}$	$4\frac{7}{8} - 1\frac{4}{8}$							percent through book
H.	$3\frac{2}{5}$	$3\frac{4}{10}$	$4\frac{5}{10} - 1\frac{1}{10}$						91.43

129	Dividing a Decimal Number by a Whole Number						
Mental Math				Problem set			
	33 x .50			1	1/6 + 1/3 = 1/2		
	60	210		2	10	18	
				3	June 21		
A.	4			4	2/3	33 1/3	
B.	8			5	1/10	0.1	10
C.	12			6	4	48	
D.	28	*		7	4/3	1 1/3	
				8	9807		
				9	DC	(segment DC or line above letters)	
				10	14	12	
				11	98	28	14
Problem Solving				12	69.295		
	30 10			13	2.178		
				14	430		
				15	23.68		
				16	0.0144		
				17	1.8		
				18	0.17		
				19	121.5		
				20	3 7/8	2 1/8 + 1 6/8	
				21	1/2	3/6	2/6 + 1/6
Practice				22	1/5	2/10	7/10 - 5/10
A.	0.13			23	3 7/10	3 9/10 - 2/10	
B.	0.6			24	6	12/2	
C.	0.17			25	3	12/4	
D.	1.5						
E.	0.13						
F.	0.7						
G.	0.17			*don't do order of operations (see lesson 21 for comma)			
H.	0.16					percent through book	
I.	0.29					92.14	

130 Dividing Decimal Numbers: Fill Empty Places with Zero			
Mental Math		Problem set	
12	12	1	***
		2	September
A.	33 $\frac{1}{3}$	3	12
B.	66 $\frac{2}{3}$	4	80
C.	100	5	$\frac{1}{100}$ $\frac{1}{50}$ $\frac{2}{100}$
D.	7 *	6	25
E.		7	$11\frac{1}{8}$ $1\frac{3}{8}$
F.		8	1 $\frac{4}{3} \times \frac{3}{4}$
G.		9	1.3 1.03
H.		10	16 15
Problem Solving		11	$4\frac{3}{4}$
20	4	12	6.50
		13	4.08
		14	4.5
***		15	297.6
		16	0.048
		17	0.006
		18	0.018
		19	35 r10 35 10
		20	$1\frac{1}{3}$ $1\frac{2}{6}$ $\frac{8}{6}$
		21	$2\frac{3}{8}$
		22	$\frac{1}{2}$ $\frac{3}{6}$
Practice		23	$3\frac{1}{8}$
A.	0.04	24	$\frac{3}{10}$
B.	0.05	25	$1\frac{1}{5}$ $\frac{6}{5}$
C.	0.005		
D.	0.02		
E.	0.04		
F.	0.004	*don't do order of operations (see lesson 21 for comma)	
G.	0.02		percent through book
H.	0.003		92.86

131 Dividing Decimal Numbers: Keep Dividing							
Symmetry Trick				Problem set			
Answers may vary				1	C //		
words using the letters				2	30	6x5	
BCDEHIKOX				3	8	8.3333	
				4	C		
examples:				5	70		
I	CODE			6	2/50	4/100	
BE	DECK				1/20	5/100	
HI	HIDE			7	11/4	2 3/4	
BED	HIKE			8	11/8	11/8 x 1/2	11/16
BID	HOOD			9	octagon		
BODE	ICE			10	5/6	5/5	5/3 (1 2/3)
BOX	KICK			11	2	4	
COB	KID			12	78.155		
				13	0.766		
					seven hundred sixty-six thousandths		
				14	313.2		
				15	420		
				16	0.085		
				17	0.15		
				18	0.06		
Practice				19	35 r10	35	10
A.	0.15			20	3 4/9	3 1/9 + 3/9	
B.	0.024			21	1 1/6	7/6	2/6 + 5/6
C.	0.025			22	5/8	7/8 - 2/8	
D.	0.05			23	3 1/5	3 2/10	4 5/10 - 1 3/10
E.	0.08			24	4		
F.	0.175			25	9		
G.	0.125						
H.	0.075						
I.	0.075						
						percent through book	
						93.57	

132 Dividing Decimal Numbers by 10, 100, and 1000				
Problem Solving		Problem set		
madam		1	8	32
54345		2	$1/2 + 1/4 < 1$	
45354		3	1320	
noon		4	11:30 am	$11 / 2 = 5.5$
		5	10/100	0.1
				10
		6	50	$1/2$
		7	$7/2$	$3 \frac{1}{2}$
		8	$11/4$	$11/4 \times 1/3$
				$11/12$
		9	20	24
		10	14	18
		11	0.35	
		12	0.043	
		13	28.75	
		14	0.01	
		15	430	
		16	0.0222	
		17	63.92	
		18	2.75	
Practice		19	1.19	
A.	0.25	20	0.015	
B.	3.24	21	$3 \frac{7}{10}$	$1 \frac{6}{10} + 2 \frac{1}{10}$
C.	0.025	22	$2 \frac{1}{6}$	$3 \frac{2}{6} - 1 \frac{1}{6}$
D.	0.324	23	$5/16$	
E.	0.0025	24	$4/5$	$8/10$
F.	0.0324	25	6	4
G.	6.4			
H.	0.0125			
I.	0.64			
J.	63.0			
K.	0.064			percent through book
L.	0.005			94.29

133 Finding the Average of Two or More Numbers							
Mental Math				Problem set			
	48	48		1	Draw		
	10	1000		2	$1/2 + 1/6 = 2/3$		
				3	115		
A.	5			4	$4/5$	0.8	80
B.	45				$80/100$		
				5	$1/2$	50	
				6	$17/4$	$4 \frac{1}{4}$	
				7	$7/2$	$7/2 \times 2/3$	
					$2 \frac{1}{3}$	$7/3$	$14/6$
				8	8		
				9	Pentagon		
Problem Solving				10	40	100	
	36×3		108	11	164.525		
	12×9			12	3.95		
				13	4.8		
				14	2176.1		
				15	0.075		
				16	0.036		
				17	0.72		
				18	0.04		
				19	$9 \frac{11}{12}$	$6 \frac{10}{12} + 3 \frac{1}{12}$	
				20	$3 \frac{5}{12}$	$5 \frac{11}{12} - 2 \frac{6}{12}$	
				21	$3 \frac{1}{3}$	$10/3$	$20/6$
				22	$4 \frac{4}{5}$	$24/5$	
				23	$13/14$	$6/14 + 7/14$	
				24	44		
Practice				25	12		
A.	10						
B.	4						
C.	83					percent through book	
D.	305					95.00	

134	Adding and Subtracting Fractions, Part 3						
Mental Math				Problem set			
	60 ÷ 1000			1	8		
	0.059			2	$1/2 - 1/3 = 1/6$		
				3	920		
A.	3			4	40		
B.	27			5	$2/5$	0.4	40
C.	33				$4/10$		
				6	$1/3$	$66 \frac{2}{3}$	
				7	$9/4$	$9/4 \times 2/3$	
					$1 \frac{1}{2}$	$1 \frac{6}{12}$	$18/12$
				8	7		
				9	65	15	
Problem Solving				10	268.89		
	98789			11	0.185		
	10201			12	460		
				13	0.0184		
				14	181.3		
				15	0.046		
				16	0.115		
				17	0.092		
				18	$5/6$	$3/6 + 2/6$	
				19	$5/12$	$8/12 - 3/12$	
Practice				20	$1/12$	$5/12 - 4/12$	
A.	$7/12$	$4/12 + 3/12$		21	$2 \frac{2}{5}$	$12/5$	
B.	$8/15$	$3/15 + 5/15$		22	$6 \frac{2}{3}$	$20/3$	
C.	$1/6$	$3/6 - 2/6$		23	3	$15/5$	
D.	$11/12$	$8/12 + 3/12$		24	10	3	
E.	$13/15$	$10/15 + 3/15$		25	C		
F.	$1/12$	$9/12 - 8/12$					
G.	$9/10$	$5/10 + 4/10$					
H.	$17/20$	$12/20 + 5/20$					percent through book
I.	$5/12$	$8/12 - 3/12$					95.71

135 Adding and Subtracting Mixed Numbers, Part 3							
Mental Math				Problem set			
add the 4 heights and then divide by 4				1	9.60	0.16	
				2	$1/2 \times 1/3 = 1/6$		
A.	10			3	Hexagon		
B.	30			4	7		
C.	50			5	0.50	=	0.50
				6	$1/2$	0.5	50
				7	No because it is more likely that it won't rain		
				8	$5/2$	$4/3$	
					$3 \frac{1}{3}$	$20/6$	$3 \frac{2}{6}$
				9	3	12	
Problem Solving				10	$5/9$	$10/18$	
	1461	1988 is a leap year		11	$1 \frac{1}{4}$	$15/12$	
				12	$4 \frac{7}{12}$	$3 \frac{4}{12} + 1 \frac{3}{12}$	
				13	$1 \frac{1}{10}$	$11/10$	$6/10 + 5/10$
				14	$7 \frac{3}{10}$	$8 \frac{5}{10} - 1 \frac{2}{10}$	
				15	$1/6$	$4/6 - 3/6$	
				16	34.567		
				17	0.001		
				18	478.8		
				19	57		
				20	0.045		
Practice				21	1.9		
A.	$3 \frac{7}{10}$	$2 \frac{5}{10} + 1 \frac{2}{10}$		22	0.57		
B.	$4 \frac{9}{20}$	$3 \frac{5}{20} + 1 \frac{4}{20}$		23	0.05		
C.	$5 \frac{11}{12}$	$4 \frac{8}{12} + 1 \frac{3}{12}$		24	11		
D.	$5 \frac{1}{4}$	$3 \frac{3}{4} + 1 \frac{2}{4}$	$4 \frac{5}{4}$	25	11	9,10,10,11,12,12,13	
E.	$1 \frac{1}{4}$	$5 \frac{3}{4} - 4 \frac{2}{4}$					
F.	$3 \frac{1}{6}$	$4 \frac{4}{6} - 1 \frac{3}{6}$					
G.	$1 \frac{5}{12}$	$2 \frac{8}{12} - 1 \frac{3}{12}$				percent through book	
H.	$4 \frac{1}{12}$	$6 \frac{4}{12} - 2 \frac{3}{12}$				96.43	

136 Dividing by a Decimal Number

Mental Math

$11 + 11 + 8 \frac{1}{2} + 8 \frac{1}{2}$

$11 \times 8 \frac{1}{2}$

A. 20

B. 40

C. 80

Problem set

1 ***

2 7

3 96 48

4x lions, 2x tigers, bears

4 15999

5 C. 5

6 $\frac{10}{3}$ $\frac{10}{3} \times \frac{3}{4}$

Problem Solving

2 $\frac{1}{2}$ $\frac{2}{6}$ $\frac{30}{12}$

H, I, O, X

7 $\angle ADC$ or $\angle CDA$

8 DA and CB

(segment.. or line above letters)

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

+ -

x

÷

÷

Line up the decimal points.

Multiply. Then count decimal places.

Whole #

Decimal #

up

over, over, up

10 $3 \frac{2}{3}$ $3 \frac{4}{6}$ $2 \frac{1}{6} + 1 \frac{3}{6}$

11 $4 \frac{1}{3}$ $4 \frac{2}{6}$ $5 \frac{5}{6} - 1 \frac{3}{6}$

12 $3 \frac{5}{12}$ $4 \frac{8}{12} - 1 \frac{3}{12}$

13 0.08

14 0.24

Place decimal points on whole numbers.

15 0.015

Fill empty places with zero.

16 0.8

17 2

18 0.15

Practice

A. 4

19 26.78

B. 1.4

20 1.24

C. 0.2

21 0.0144

D. 0.6

22 1.2

E. 14

23 29.64

F. 3

24 $1 \frac{1}{2}$ $1 \frac{4}{8}$ $\frac{12}{8}$

G. 4

25 $10 \frac{2}{3}$ $\frac{32}{3}$

H. 0.25

percent through book

I. 1.9

97.14

137 Multiplying Mixed Numbers									
Mental Math					Problem set				
Add the 3 lengths then divide by 3					1	***			
					2	Cylinder			
A.	2				3	$2 + 2 = 2 \times 2$			
B.	22				4	D. 0.05			
C.	18				5	24	$25 \frac{5}{6}$		
D.	9	*			6	50			
Problem Solving					7	18	6	18	
Draw					8	$\frac{1}{2}$	2,3,5	$\frac{3}{6}$	
	8	$2 \times 2 \times 2$				50			
	27	$3 \times 3 \times 3$			9	3	8-5		
	64	$4 \times 4 \times 4$			10	5			
					11	9	2		
					12	97.978			
					13	5.26			
					14	240			
***	+ -		x		÷	÷			
	Line up the decimal points.		Multiply. Then count decimal places.		Whole #	Decimal #			
					up	over, over, up			
Place decimal points on whole numbers.					15	0.0288			
Fill empty places with zero.					16	13.68			
					17	0.041			
					18	8.7			
					19	1.2			
					20	$11 \frac{1}{12}$	$3 \frac{4}{12} + 7 \frac{9}{12}$		
						$10 \frac{13}{12}$			
					21	$\frac{13}{14}$	$\frac{6}{14} + \frac{7}{14}$		
					22	$5 \frac{11}{15}$	$6 \frac{14}{15} - 1 \frac{3}{15}$		
Practice					23	$\frac{7}{15}$	$\frac{12}{15} - \frac{5}{15}$		
A.	$2 \frac{5}{8}$	$\frac{3}{2}$	$\frac{7}{4}$	$\frac{21}{8}$	24	$1 \frac{2}{3}$	$1 \frac{4}{6}$	$\frac{10}{6}$	
B.	$5 \frac{5}{6}$	$\frac{7}{2}$	$\frac{5}{3}$	$\frac{35}{6}$				$\frac{1}{2} \times \frac{10}{3}$	
C.	$7 \frac{1}{2}$	$\frac{3}{1}$	$\frac{5}{2}$	$\frac{15}{2}$	25	10	$\frac{20}{2}$	$4 \times \frac{5}{2}$	
D.	$14 \frac{2}{3}$	$\frac{4}{1}$	$\frac{11}{3}$	$\frac{44}{3}$	*don't do order of operations (see lesson 21 for comma)				
E.	$\frac{7}{9}$	$\frac{1}{3}$	$\frac{7}{3}$		percent through book				
F.	$\frac{17}{36}$	$\frac{1}{6}$	$\frac{17}{6}$		97.86				

138	Locatin horizontal then vertical						
Mental Math				Problem set			
	13 x 10			1	2,3,5,7,11,13		
				2	9		
A.	20			3	83		
B.	60			4	1		
C.	60			5	A 25		
				6	triangle		
				7	pentagon		
				8	(1,4)		
				9	15		
				10	48	144	
				11	20.625		
Problem Solving				12	3.067		
	300			13	0.0444		
				14	4.8		
				15	41.752		
				16	1.1		
				17	0.4		
				18	0.406		
				19	4 9/20	3 7/20 + 1 2/20	
				20	9/20	5/20+4/20	
				21	2 7/10	5 8/10 - 3 1/10	
				22	1/10	5/10 - 4/10	
				23	8/9	1/3 x 8/3	
				24	5	15/3	3 x 5/3
				25	3 3/5	18/5	3/1 ÷ 5/6
Practice							
A.	L						
B.	K						
C.	(2,3)					percent through book	
D.	(3,5)					98.57	

139	Recognizing Negative Numbers							
Mental Math					Problem set			
	60				1	667	23 x 29	
					2	5	6	
A.	4				3	1/4	<	1
B.	36				4	80		
C.	44				5	24	24.01	
					6	A		
					7	A (3,1)		
					8	1/3		
					9	33 1/3		
					10	960		
					11	149.165		
Problem Solving					12	1.825		
	Answers may vary				13	630		
					14	0.0216		
					15	2.66		
					16	0.325		
					17	0.84		
					18	2.03		
					19	8 1/6	7 7/6	6 5/6 + 1 2/6
					20	17/20	12/20 + 5/20	
					21	3 2/3	3 8/12	4 9/12 - 1 1/12
					22	1/20	16/20 - 15/20	
					23	11/25	1/5 x 11/5	
					24	10 1/2	3/1 x 7/2	21/2
Practice					25	1 2/3	1 4/6	10/6
A.	-1							
B.	-3							
C.	-2							
D.	-1							
E.	-3						percent through book	
F.	-3						99.29	

140	Locating Points on a Coordinate Graph, Part 2						
Mental Math				Problem set			
	30	31,28,31			1	***	
					2	1.29	
A.	5				3	40	
B.	10				4	G	
C.	10				5	E	
					6	(-3,2)	
					7	1/2	2/4
					8	25	
					9	175	
					10	7.28	
					11	6.25	
Problem Solving					12	0.0448	
	800	1600			13	14.3	
					14	0.55	
					15	0.84	
					16	0.22	
					17	8 2/3	8 4/6 5 1/6 + 3 3/6
					18	1 7/20	12/20 + 15/20
					19	2 2/5	2 4/10 3 9/10 - 1 5/10
					20	5/14	7/14 - 2/14
					21	2/3	8/12 1/4 x 8/3
					22	22	44/2 4/1 x 11/2
					23	8	24/3 3/1 ÷ 3/8
					24	11,13,17,19	
					25	3x2x2	
Practice							
A.	origin						
B.	(4,3)						
C.	(-2,4)						
D.	(-3,-2)						percent through book
E.	(5,-3)						100.00

length		Roman numerals		Common Polygons	
US	Metric	I	1	3 Triangle	
12 in = 1 ft	10 mm = 1 cm	V	5	4 Quadrilateral	
3 ft = 1 yd	1000 mm = 1 m	X	10	5 Pentagon	
5280 ft = 1 mi	100 cm = 1 m	L	50	6 Hexagon	
1760 yd = 1 mi	1000 m = 1 km	C	100	8 Octagon	
		D	500		
weight	Mass	M	1000	Geometric Solids	
US	Metric			Cube	
16 oz = 1 lb	1000 g = 1 kg	Lines		Rectangular solid	
2000 lb = 1 ton		Horizontal	=====	Pyramid	
		Vertical		Cylinder	
Liquid Measure		Oblique	/ \	Sphere	
US	Metric			Cone	
8 oz = 1 c	1000mL = 1 L				
16 oz = 1 pt		Types of angles			
2 pt = 1 qt		Acute	A“cute” little angle		
4 qt = 1 gal		Right	90 degrees or L		
		Obtuse			
16 c = 1 gal		Straight	_____		
8 pt = 1 gal					

https://drive.google.com/open?id=1a7QPTpWDxSmnXvYNN44Y7MvclXUW_GJDyQO-ClyA1Yg

Land of Gallon

In the Land of Gallon there are 4 Queens.	4 quarts
Each Queen had a prince and a princess.	4 quarts x 2 (prince & princess) = 8 pints
Each prince and princess had 2 children.	8 pints x 2 (children) = 16 cups

Measures of a Circle

Sir Cumference and the Round Table book

https://en.wikipedia.org/wiki/Sir_Cumference

Sir Cumference is a knight in the kingdom of Camelot.

He has a wife called Lady Di of Ameter and a son named Radius.

Circumference	distance (or perimeter) around a circle
Diameter	distance across a circle through the center
Radius	distance from center of a circle to a point (or half the diameter)

Probability is written as a fraction unless it is certain (1) or certain NOT to happen (0)

Chance is written as a % from 0% to 100%