

TABLE OF CONTENTS

About The Author..... ii
 About This Book vii
 How to Use This Book vii
 Teaching Suggestions vii
 General Comments viii
 Answers 350

NCTM STANDARDS	Number and Operations	Algebra	Geometry	Measurement	Data Analysis and Probability
SKILLS					
Analyze	243, 244, 245, 262, 263, 283, 334	19, 67, 72, 73, 143, 163, 204, 206, 234, 235, 236, 239, 263, 276, 277, 283, 289, 309, 314, 322, 329, 331		320	
Angle			36, 129, 135, 218, 224, 288, 344	36, 129, 135	
Area				46, 115, 116, 219, 220, 297, 316, 324	
Calendar				15, 194	
Capacity <small>customary, metric</small>				102, 103, 164, 165, 268, 269	
Characteristics	9, 40, 52, 68, 69, 72				
Congruence			31, 107, 128, 136, 170, 171, 218		
Coordinate System			6, 113, 135, 202, 203, 318		
Count	4, 255				
Data Analysis <small>bar graph, line graph, survey, table</small>					7, 14, 50, 51, 86, 87, 140, 176, 177, 213, 242
Data Collection					7, 43, 86, 87, 140, 213, 242, 248, 249, 317
Decimals <small>concept, add, subtract</small>	32, 33, 34, 35, 119, 120, 121, 158, 159, 160, 231, 232, 233, 275, 280, 281, 286, 323				
Draw <small>parallel, perpendicular, by definition</small>			27, 135, 300		
Equations Expression		19, 56, 57, 227, 325, 345			

TABLE OF CONTENTS (Cont.)

NCTM STANDARDS	Number and Operations	Algebra	Geometry	Measurement	Data Analysis and Probability
SKILLS (cont.) Equivalence	61, 64, 108, 110, 111, 112, 158, 197, 243, 256, 261				
Estimation addition, subtraction, multiplication, division	53, 92, 93, 131, 174, 175, 178, 179, 208, 255			53, 131, 178, 179, 264, 265	349
Factors form/vocabulary, add, subtract	58, 73, 153, 197, 228, 229, 278, 283				
Fractions	48, 49, 60, 61, 64, 108, 109, 110, 111, 112, 119, 120, 154, 155, 156, 158, 197, 198, 199, 200, 201, 231, 232, 233, 252, 253, 256, 258, 259, 260, 261, 304, 306, 307, 310, 311, 312, 321, 323, 340				
Graph/Table/Chart analyze, represent		7, 14, 50, 57, 62, 63, 230			51, 87, 140, 213
Inequalities	5, 110, 111, 112, 280, 283				
Length customary, metric				20, 21, 130, 131, 164, 165, 178, 179, 237, 252, 264, 265, 266, 267, 301, 302, 308	
Likelihood/Prediction					50, 78, 137, 213, 255, 320
Mean					79, 138, 217, 275
Median					217, 275
Mode					138, 217, 275
Money add, subtract	32, 33, 34, 35, 85, 118, 161, 162, 163, 182, 183, 189, 195, 196, 281, 286, 335, 339, 342, 346, 347				

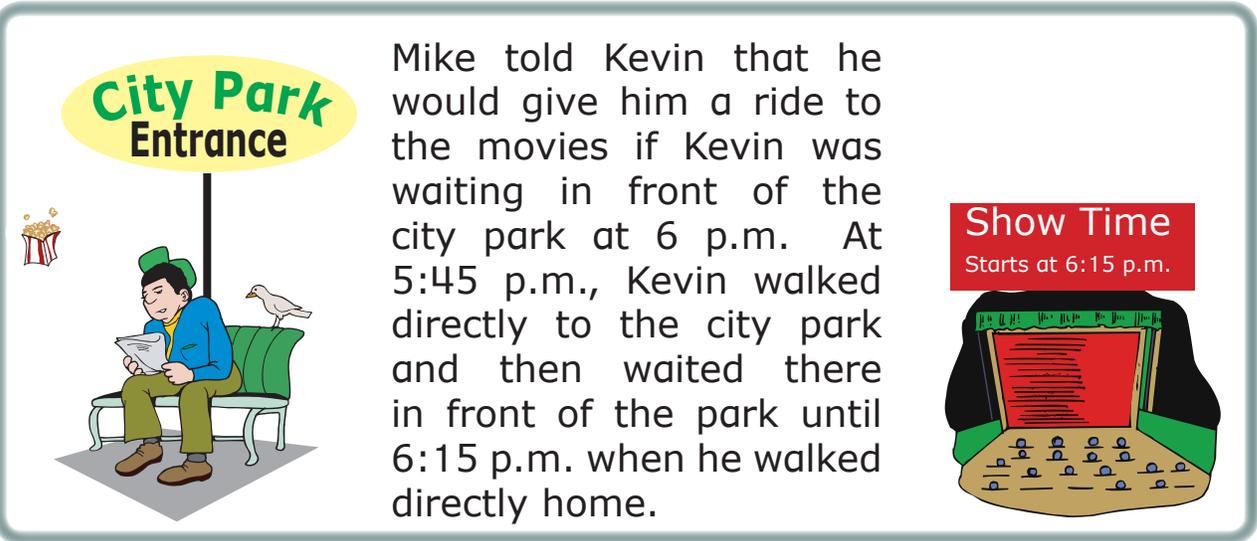
TABLE OF CONTENTS (Cont.)

NCTM STANDARDS	Number and Operations	Algebra	Geometry	Measurement	Data Analysis and Probability
SKILLS (cont.) Multiple	88, 89, 279, 283, 292				
Negative Numbers	270, 271				
Order	5, 86, 110, 111, 142, 147, 230				
Order of Operations	142, 274				
Pattern <small>geometric, numeric</small>	4, 52, 234, 283	4, 52, 53, 106, 139, 230, 239			
Perimeter				47, 117, 219, 220, 316	
Place Value <small>expanded notation, number form, word form</small>	1, 2, 3, 44, 45, 96, 97, 119, 120, 137, 142, 157, 172, 250, 251				
Polygon			28, 29, 30, 31, 62, 63, 65, 124, 125, 218, 224, 277, 288		
Prime/Composite	59, 151, 152, 229, 283, 341				
Properties		9, 40, 67, 72, 221			
Reflection, Translation, Rotation			76, 186, 333		
Rounding	53, 92, 93, 173, 174, 175, 208				

TABLE OF CONTENTS (Cont.)

NCTM STANDARDS	Number and Operations	Algebra	Geometry	Measurement	Data Analysis and Probability
SKILLS (cont.) Shapes <small>2 dimensional, 3 dimensional</small>			28, 29, 30, 31, 62, 63, 65, 114, 124, 125, 218, 224, 254, 277, 282, 288, 303		
Symmetry			77, 136, 171		
Temperature <small>customary, metric</small>	192			50, 54, 55, 191, 192, 271	
Time	37, 193, 194, 225			15, 132, 133, 134, 140, 193, 194, 257	
Variable as Unknown <small>in addition, in subtraction, in multiplication, in division</small>	91	19, 80, 104, 105, 141, 142, 143, 187, 204, 227, 238, 239, 305			
Weight <small>customary, metric</small>			94, 95, 164, 165, 268, 269		
Whole Numbers <small>addition, subtraction, multiplication, division</small>	5, 8, 9, 10, 11, 12, 13, 16, 17, 18, 22, 23, 24, 25, 26, 38, 39, 40, 41, 42, 43, 52, 53, 56, 57, 66, 68, 69, 70, 71, 72, 73, 74, 75, 80, 81, 82, 83, 84, 90, 91, 98, 99, 100, 101, 122, 123, 126, 127, 146, 147, 148, 150, 163, 166, 167, 168, 169, 180, 181, 184, 185, 186, 187, 188, 189, 190, 204, 205, 206, 208, 209, 210, 211, 212, 214, 215, 216, 221, 222, 223, 225, 226, 231, 234, 240, 241, 246, 247, 255, 262, 263, 272, 273, 275, 284, 285, 287, 290, 291, 293, 294, 295, 296, 298, 299, 313, 319, 326, 327, 328, 330, 332, 336, 337, 338, 343, 348				
Word Problems	5, 25, 40, 49, 50, 56, 57, 65, 74, 75, 80, 82, 85, 98, 99, 100, 101, 121, 127, 144, 145, 146, 148, 149, 161, 163, 176, 177, 180, 181, 185, 207, 214, 215, 225, 231, 235, 236, 237, 245, 248, 249, 250, 251, 253, 270, 281, 283, 284, 285, 295, 315, 326, 335, 342, 343, 345, 346, 347				

Smarty Pants Puzzles™



Mike told Kevin that he would give him a ride to the movies if Kevin was waiting in front of the city park at 6 p.m. At 5:45 p.m., Kevin walked directly to the city park and then waited there in front of the park until 6:15 p.m. when he walked directly home.

Read the problem and then write whether each sentence is true, false, or unknown based on the information.

- _____ 1. Kevin arrived at the park before 6 p.m.
- _____ 2. Mike could not have kept his promise to Kevin.
- _____ 3. If Kevin arrived at the front of the park at 5:59 p.m., then Mike did not keep his promise to Kevin.
- _____ 4. If Kevin arrived home at 6:30 p.m. and it took him more time to walk home than it took him to walk to the front of the park, Mike did not keep his promise to Kevin.

Write each pair of fractions as equivalent fractions with the same denominator, then write $<$, $>$, or $=$ in the \bigcirc to make each number sentence true.



a $\frac{1}{6}$ $<$ $\frac{1}{4}$ is equivalent to

$\frac{1}{6} \times \frac{2}{2} = \frac{2}{12}$ $\frac{1}{4} \times \frac{3}{3} = \frac{3}{12}$

$\frac{2}{12} < \frac{3}{12}$

b $\frac{2}{3}$ \bigcirc $\frac{3}{5}$ is equivalent to

$\frac{\square}{\square} \bigcirc \frac{\square}{\square}$

c $\frac{5}{6}$ \bigcirc $\frac{7}{9}$ is equivalent to

$\frac{\square}{\square} \bigcirc \frac{\square}{\square}$

d $\frac{1}{2}$ \bigcirc $\frac{1}{4}$ is equivalent to

$\frac{\square}{\square} \bigcirc \frac{\square}{\square}$

e $\frac{2}{3}$ \bigcirc $\frac{7}{9}$ is equivalent to

$\frac{\square}{\square} \bigcirc \frac{\square}{\square}$

Make **change** like a clerk.



...change
\$3.12...

\$1.00
1.00
1.00
.10
.01
.01
3.12



ABC Store

05/16/2010
Cash Receipt

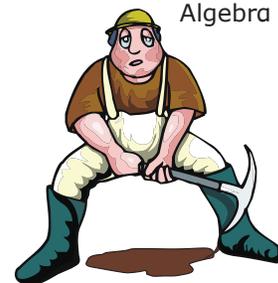


\$1.00 butter
2.09 eggs
2.99 bread
.80 candy
\$6.88 TOTAL

Fill in the table with the fewest bills and coins needed to total the amount in the change column.



change	\$1	25¢	10¢	5¢	1¢
\$3.12	3		1		2
\$2.30					
\$1.50					
\$4.36					
\$3.63					
\$1.86					
\$2.91					
\$1.47					
\$4.74					
\$1.89					
\$.99					
\$2.49					



Find the missing numbers.

a $82 \times 6 = \square$

b
$$\begin{array}{r} \square \\ 5 \overline{)205} \end{array}$$

c $64 \times \square = 448$

d
$$\begin{array}{r} 60 \\ \square \overline{)300} \end{array}$$

e $26 \times \square = 208$

f
$$\begin{array}{r} \square \\ 9 \overline{)378} \end{array}$$

g $19 \times 3 = \square$

h
$$\begin{array}{r} 12 \\ 7 \overline{) \square} \end{array}$$

i $84 \times \square = 252$

j
$$\begin{array}{r} 16 \\ \square \overline{)144} \end{array}$$

k $\square \times 8 = 448$

l
$$\begin{array}{r} \square \\ 4 \overline{)156} \end{array}$$

Which number below was not an answer above?



Unlike fractions are fractions with different denominators. They can be written with the same denominator by finding the smallest number that both denominators can evenly divide into.

The lowest common denominator (LCD) is found by writing the multiples of each denominator until a common number is found.

$\frac{1}{4}$	4: 4, 8, 12	$\frac{3}{12}$
$\frac{2}{3}$	3: 3, 6, 9, 12	$\frac{8}{12}$



Complete the table.

	<u>LCD</u>					
a	<u>6</u>	$\frac{1}{2} + \frac{1}{3}$	$= \frac{3}{6} + \frac{2}{6}$	$= \frac{5}{6}$		
r	_____	$\frac{1}{4} + \frac{1}{2}$	$= \text{---} + \text{---}$	$= \text{---}$		
y	_____	$\frac{1}{6} + \frac{1}{4}$	$= \text{---} + \text{---}$	$= \text{---}$		
e	_____	$\frac{1}{6} + \frac{5}{9}$	$= \text{---} + \text{---}$	$= \text{---}$		
f	_____	$\frac{1}{2} + \frac{2}{5}$	$= \text{---} + \text{---}$	$= \text{---}$		

Multiply or divide, then circle your answer on the pyramids below.



1

$$\begin{array}{r} 48 \\ \times 6 \\ \hline \end{array}$$

2

$$\begin{array}{r} 461 \\ \times 5 \\ \hline \end{array}$$

3

$$\begin{array}{r} 652 \\ \times 4 \\ \hline \end{array}$$

4

$$\begin{array}{r} 1,285 \\ \times 9 \\ \hline \end{array}$$

5

$$\begin{array}{r} 12 \\ \times 45 \\ \hline \end{array}$$

6

$$\begin{array}{r} 78 \\ \times 26 \\ \hline \end{array}$$

7

$$\begin{array}{r} 149 \\ \times 38 \\ \hline \end{array}$$

8

$$\begin{array}{r} 1,605 \\ \times 19 \\ \hline \end{array}$$

9

$$6 \overline{)30}$$

10

$$9 \overline{)54}$$

11

$$4 \overline{)136}$$

12

$$5 \overline{)315}$$

13

$$4 \overline{)212}$$

14

$$7 \overline{)133}$$

15

$$8 \overline{)2,176}$$

16

$$10 \overline{)420}$$