

ADVANTAGE Math

Grade

4

Table of Contents

UNIT 1 NUMERATION AND NUMBER THEORY

- 1 Place Value
- 2 Fractions
- 3 Decimals
- 4 Equivalent Fractions
- 5 Reducing Fractions
- 6 Equivalent Numbers
- 7 Comparing Numbers
- 8 Comparing Numbers
- 9 Number Line
- 10 Mixed Practice
- 11 Money Notation
- 12 Money Notation
- 13 Expanded Form
- 14 Roman Numerals
- 15 Take a Test Drive
- 16 Take a Test Drive

UNIT 2 ESTIMATION AND NUMBER THEORY

- 17 Rounding
- 18 Rounding
- 19 Factors and Multiples
- 20 Factors and Multiples
- 21 Multiples
- 22 Multiples
- 23 Rules of Divisibility
- 24 Rules of Divisibility
- 25 Perfect Squares
- 26 Perfect Squares
- 27 Mixed Practice

- 28 Mixed Practice
- 29 Take a Test Drive
- 30 Take a Test Drive

UNIT 3 OPERATIONS

- 31 Addition and Subtraction
- 32 Addition and Subtraction
- 33 Addition and Subtraction
- 34 Addition of Decimals
- 35 Subtraction of Decimals
- 36 Addition and Subtraction of Fractions
- 37 Addition and Subtraction of Fractions
- 38 Number Properties
- 39 Multiplication Facts
- 40 Division Facts
- 41 Mixed Practice
- 42 Mixed Practice
- 43 Multiplication
- 44 Multiplication
- 45 Multiplication
- 46 Multiplication Practice
- 47 Division
- 48 Division
- 49 Division
- 50 Division Practice
- 51 Problem Solving
- 52 Problem Solving
- 53 Mixed Practice
- 54 Mixed Practice
- 55 Take a Test Drive

Table of Contents

56 Take a Test Drive

UNIT 4 MEASUREMENT

57 Length
58 Perimeter
59 Area
60 Volume
61 Time
62 Time
63 Angles
64 Angles
65 Standard and Metric Measures
66 Story Problems
67 Mixed Practice
68 Tables and Charts
69 Take a Test Drive
70 Take a Test Drive

UNIT 5 GEOMETRY

71 Dimensions
72 Dimensions
73 Similar Figures
74 Congruent Figures
75 Geometric Figures
76 Geometric Figures
77 Graphing
78 Graphing

79 Story Problems
80 Story Problems
81 Take a Test Drive
82 Take a Test Drive

UNIT 6 ALGEBRAIC THINKING, DATA ANALYSIS, AND PROBABILITY

83 Mathematical Relationships
84 Tables and Charts
85 Variables
86 Variables
87 Using Information
88 Using Information
89 Comparing Information
90 Circle Graphs
91 Mean, Median, and Mode
92 Range
93 Combinations
94 Possible Outcomes
95 Probability
96 Predicting Outcomes
97 Practice Test
98 Practice Test
99 Practice Test
100 Practice Test
Tracking Sheet
Answer Key

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Introduction

The Advantage Math Series for grades 3–6 offers instruction and practice for key skills in each math strand recommended by the National Council for Teachers of Mathematics (NCTM), including

- numeration and number theory
- operations
- geometry
- measurement
- patterns, functions, and algebra
- data analysis and probability
- problem solving

Take a look at all the advantages this math series offers . . .

Strong Skill Instruction

- The **teaching component** at the top of the activity pages provides the support students need to work through the book independently.
- Plenty of **skill practice** pages will ensure students master essential math computation skills they need to increase their math fluency.
- A **problem-solving strand** is woven within skill practice pages to offer students an opportunity to practice critical thinking skills.

teaching component

27

Subtraction—Regrouping

When subtracting, look at the ones column first. If the bottom digit is greater than the top digit you need to regroup.

Look at the ones column. Since 8 is greater than 1, you need to regroup. Take 1 ten from the tens place. Add it to the ones. Subtract the ones. Then subtract the tens.

Circle yes or no to tell if you need to regroup. Then subtract to solve.

1	43	yes	no	28	yes	no	43	yes	57	yes
	$\begin{array}{r} 43 \\ -8 \\ \hline \end{array}$			$\begin{array}{r} 28 \\ -15 \\ \hline \end{array}$			$\begin{array}{r} 43 \\ -15 \\ \hline \end{array}$		$\begin{array}{r} 57 \\ -28 \\ \hline \end{array}$	
2	80	yes	no	52	yes	no	71	yes	43	yes
	$\begin{array}{r} 80 \\ -32 \\ \hline \end{array}$			$\begin{array}{r} 52 \\ -12 \\ \hline \end{array}$			$\begin{array}{r} 71 \\ -29 \\ \hline \end{array}$		$\begin{array}{r} 43 \\ -14 \\ \hline \end{array}$	
3	32	yes	no	87	yes	no	35	yes	46	yes
	$\begin{array}{r} 32 \\ -13 \\ \hline \end{array}$			$\begin{array}{r} 87 \\ -48 \\ \hline \end{array}$			$\begin{array}{r} 35 \\ -27 \\ \hline \end{array}$		$\begin{array}{r} 46 \\ -18 \\ \hline \end{array}$	
4	23	yes	no	30	yes	no	81	yes	72	yes
	$\begin{array}{r} 23 \\ -15 \\ \hline \end{array}$			$\begin{array}{r} 30 \\ -22 \\ \hline \end{array}$			$\begin{array}{r} 81 \\ -15 \\ \hline \end{array}$		$\begin{array}{r} 72 \\ -33 \\ \hline \end{array}$	
5	46	yes	no	60	yes	no	56	yes	32	yes
	$\begin{array}{r} 46 \\ -18 \\ \hline \end{array}$			$\begin{array}{r} 60 \\ -26 \\ \hline \end{array}$			$\begin{array}{r} 56 \\ -37 \\ \hline \end{array}$		$\begin{array}{r} 32 \\ -8 \\ \hline \end{array}$	

skill practice

31

Addition and Subtraction

Solve.

1 $7 + 4 = \underline{\quad}$ $8 + 9 = \underline{\quad}$ $5 + 6 = \underline{\quad}$ $5 + 8 = \underline{\quad}$

2 $16 + 12 = \underline{\quad}$ $8 + 21 = \underline{\quad}$ $11 - 8 = \underline{\quad}$ $14 - 6 = \underline{\quad}$

3 $15 - 8 = \underline{\quad}$ $18 - 9 = \underline{\quad}$ $19 - 11 = \underline{\quad}$ $23 - 12 = \underline{\quad}$

4	$\begin{array}{r} 21 \\ +38 \\ \hline \end{array}$	$\begin{array}{r} 74 \\ +14 \\ \hline \end{array}$	$\begin{array}{r} 58 \\ +40 \\ \hline \end{array}$	$\begin{array}{r} 9 \\ +60 \\ \hline \end{array}$	$\begin{array}{r} 35 \\ +42 \\ \hline \end{array}$	$\begin{array}{r} 26 \\ +53 \\ \hline \end{array}$
5	$\begin{array}{r} 98 \\ -53 \\ \hline \end{array}$	$\begin{array}{r} 84 \\ -50 \\ \hline \end{array}$	$\begin{array}{r} 44 \\ -42 \\ \hline \end{array}$	$\begin{array}{r} 67 \\ -37 \\ \hline \end{array}$	$\begin{array}{r} 78 \\ -52 \\ \hline \end{array}$	$\begin{array}{r} 60 \\ -20 \\ \hline \end{array}$
6	$\begin{array}{r} 342 \\ +406 \\ \hline \end{array}$	$\begin{array}{r} 732 \\ +253 \\ \hline \end{array}$	$\begin{array}{r} 63 \\ +216 \\ \hline \end{array}$	$\begin{array}{r} 834 \\ +155 \\ \hline \end{array}$	$\begin{array}{r} 930 \\ +58 \\ \hline \end{array}$	$\begin{array}{r} 345 \\ +523 \\ \hline \end{array}$
7	$\begin{array}{r} 735 \\ -314 \\ \hline \end{array}$	$\begin{array}{r} 839 \\ -628 \\ \hline \end{array}$	$\begin{array}{r} 956 \\ -623 \\ \hline \end{array}$	$\begin{array}{r} 648 \\ -521 \\ \hline \end{array}$	$\begin{array}{r} 597 \\ -364 \\ \hline \end{array}$	$\begin{array}{r} 475 \\ -423 \\ \hline \end{array}$

problem solving

43

Multiplication

When you multiply large numbers by a 1-digit number, multiply each digit of the top number by the bottom number, starting with the ones place. Regroup if the product is 10 or above.

Solve.

1	$\begin{array}{r} 45 \\ \times 3 \\ \hline \end{array}$	$\begin{array}{r} 36 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 15 \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 40 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 73 \\ \times 2 \\ \hline \end{array}$	$\begin{array}{r} 84 \\ \times 1 \\ \hline \end{array}$
2	$\begin{array}{r} 19 \\ \times 3 \\ \hline \end{array}$	$\begin{array}{r} 36 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 47 \\ \times 2 \\ \hline \end{array}$	$\begin{array}{r} 152 \\ \times 9 \\ \hline \end{array}$	$\begin{array}{r} 261 \\ \times 8 \\ \hline \end{array}$	$\begin{array}{r} 350 \\ \times 2 \\ \hline \end{array}$
3	$\begin{array}{r} 428 \\ \times 2 \\ \hline \end{array}$	$\begin{array}{r} 579 \\ \times 3 \\ \hline \end{array}$	$\begin{array}{r} 990 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 327 \\ \times 7 \\ \hline \end{array}$	$\begin{array}{r} 206 \\ \times 3 \\ \hline \end{array}$	$\begin{array}{r} 713 \\ \times 6 \\ \hline \end{array}$
4	$\begin{array}{r} 179 \\ \times 4 \\ \hline \end{array}$	$\begin{array}{r} 803 \\ \times 1 \\ \hline \end{array}$	$\begin{array}{r} 263 \\ \times 3 \\ \hline \end{array}$	$\begin{array}{r} 3917 \\ \times 5 \\ \hline \end{array}$	$\begin{array}{r} 5782 \\ \times 6 \\ \hline \end{array}$	$\begin{array}{r} 1429 \\ \times 5 \\ \hline \end{array}$

5 At Paocho's Restaurant, 310 burritos are sold each year. Paocho's has been open for 5 years. How many burritos have been sold since Paocho's opened?

6 Plane tickets from Miami, Florida, to Denver, Colorado, cost \$522 each. The 4 members of the Wilson family are buying tickets from Miami to Denver. How much will the tickets cost?

7 Megan bought 5 large bags of peanuts. There are 210 peanuts in each bag. How many peanuts does she have in all?

Introduction

- **Mixed-practice pages** include a variety of math concepts on one workbook page. This challenges students to think through each problem rather than rely on a predictable format.

Assessment

- The “Take a Test Drive” pages provide practice using a **test-taking** format such as those included in national standardized and proficiency tests.
- The **tracking sheet** provides a place to record the number of right answers scored on each activity page. Use this as a motivational tool for students to strive for 100% accuracy.

Answer Key

- Answers for each page are provided at the back of the books to make **checking answers quick and easy**.

Mixed Practice

Solve:

- 47×3
- $40 \div 53$
- $5 \overline{)370}$
- $9 \overline{)7038}$
- $2637 \div 39$
- $29 \div 61$
- $2 \overline{)58}$
- $7 \overline{)105}$
- $8 \overline{)168}$
- $7 \overline{)322}$
- $5763 \div 3294$
- $3709 \div 345$
- $5 \overline{)3415}$
- $146 \div 13$
- $453 \div 84$
- $381 \div 873$
- $472 \div 265$
- $765 \div 209$
- $4 \overline{)1388}$
- $287 \div 32$
- $2974 \div 1098$

5 The band called the Screammers is playing in town for the next 4 nights. There are 42 seats in the club and all 4 shows are sold out. How many tickets were sold in all?

6 Billy, Mario, and Tom just won \$72. If they split the money evenly, how many dollars will each friend have?

mixed practice

Take a Test Drive

Test-Taking Tip: Pay attention to the labels in each answer choice. They give units of length, weight, temperature, angle, measurements, and time. Fill in the bubble beside the correct answer.

- How long is the piece of gum?
 - $\frac{1}{2}$ oz
 - $\frac{1}{2}$ in
 - $\frac{1}{2}$ in
 - 0.5 cm
- What is the perimeter of the floor of the television set?
 - 40 cm
 - 30 in
 - 30 cm
 - 22 m
- What is the area of the top of the box?
 - 11 ft
 - 20 sq ft
 - 30 ft
 - 22 sq ft
- What is the volume of the milk carton?
 - 360 sq cm
 - 320 cm
 - 360 cu cm
 - 36 cm
- 260 seconds = 4 _____
 - nanoseconds
 - minutes
 - hours
 - days
- _____ years = 1095 days
 - 3
 - 10
 - 4
 - 1
- How many right angles does this figure have?
 - 5
 - 4
 - 2
 - 3
- $\angle K$ measures _____
 - 180°
 - 135°
 - 45°
 - 90°

test-taking format

Math Grade 3 Tracking Sheet

Activity	Possible My Score	Actual My Score	Activity	Possible My Score	Actual My Score
Unit 1	26	27	Unit 5	53	12
1	8	27	20	54	10
2	10	28	20	55	8
3	10	29	20	55	8
4	18	30	20	57	6
5	26	31	20	58	6
6	19	32	18	59	8
7	19	33	8	60	10
8	20	34	8	61	10
9	24	34	8	61	4
10	24	35	11	63	8
11	8	36	12	64	8
12	8	37	32	64	8
13	36	38	30	65	9
14	36	39	32	66	9
15	27	40	32	67	9
16	27	41	33	68	7
17	20	42	33	69	6
18	30	43	33	70	8
19	30	44	32	71	5
20	30	45	33	72	5
21	8	46	33	73	7
22	8	47	23	74	6
23	36	48	23	75	8
24	36	49	23	76	8
25	27	50	31	77	7
		51	8		
		52	8		

tracking sheet

Name _____

Place Value

1



millions
hundred thousands
ten thousands
thousands
hundreds
tens
ones

4, 257, 613

Answer the questions about the following number: 9,750,386

- 1 What value does the 7 have? _____
- 2 What is the place value of the 0? _____
- 3 Which digit is in the tens place? _____
- 4 How many millions are there in this number? _____

Write the following numbers in standard form or word form.

- 5 Five thousand, four hundred seventy-nine _____
- 6 Seven hundred two thousand, eight hundred ninety-nine _____
- 7 Six million, four hundred fifty thousand, twenty-one _____
- 8 2,356 _____
- 9 1,209,411 _____
- 10 400,897 _____
- 11 What number has 5 tens, 3 thousands, 4 hundreds, and 2 ones? _____
- 12 What number has nine ones, twelve thousands, and two hundreds? _____

Name _____

Fractions

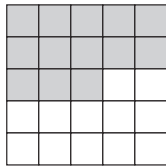
2

★ whole number $6\frac{5}{12}$ numerator = how many parts
denominator = how many parts make up a whole
fraction



Answer the question.

1

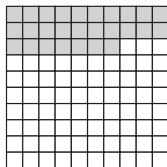


What fraction is shaded? _____

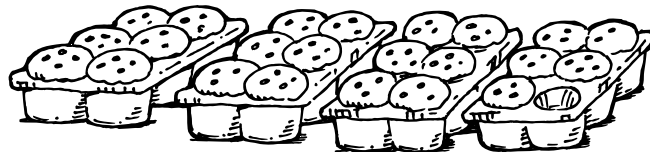


How many apples are there? _____

2



What fraction is shaded? _____



What fraction of the pans do the muffins fill? _____

Write the number in word form. Then shade in the correct amount.

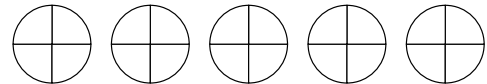
3

$\frac{3}{10}$



4

$4\frac{3}{4}$



5

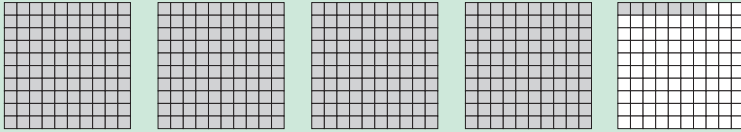
Brandi had five pages of stickers. She wanted to trade two pages. What fraction of her pages did Brandi keep?



Decimals

3

★ Numbers after a decimal point tell about an amount smaller than a whole.

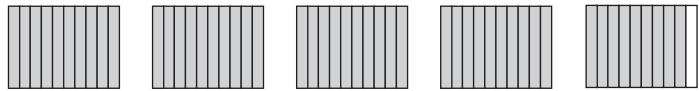
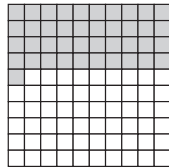


$$4\frac{7}{100} = 4.07 = \text{four and seven hundredths}$$

$\frac{7}{100}$ one-tenths hundredths

Write the number in decimal and fraction form.

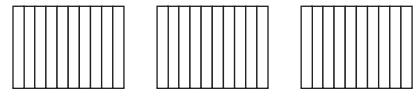
1



Write the decimal in fraction form. Then, shade the correct amount.

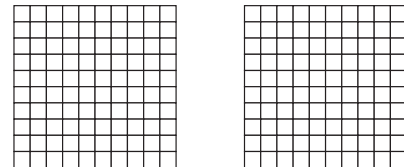
2

2.8 _____



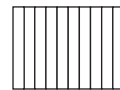
3

1.03 _____



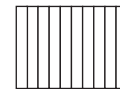
4

Ryan cut his birthday cake into ten pieces. He ate one piece himself.
How much of the cake did he eat?



5

Ryan and his two sisters each ate a piece of cake.
How much of the cake was left?



Equivalent Fractions

4

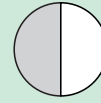
★ Different fractions can be equal, or equivalent.

The fraction $\frac{2}{4}$ is $\frac{1}{2} \times 2$ or $\frac{1}{2} \times \frac{2}{2} = \frac{2}{4}$

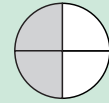
To find equivalent fractions, multiply or divide both parts of a fraction by the same number.

$$\frac{2}{7} \times \frac{5}{5} = \frac{10}{35}$$

$$\frac{3}{9} \div \frac{3}{3} = \frac{1}{3}$$



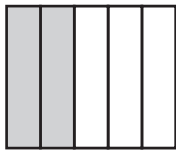
$\frac{1}{2}$



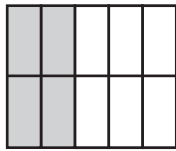
$\frac{2}{4}$

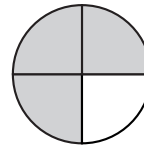
Shade the second shape to be equivalent to the first shape. Write the fractions.

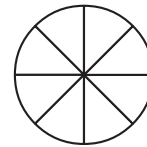
1



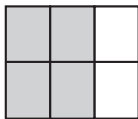
$\frac{2}{5}$



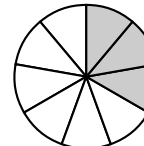


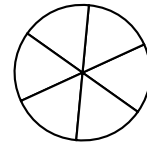


2









Complete the patterns to write equivalent fractions. Remember to multiply or divide both parts of the fraction by the same number.

3

$\frac{1}{2}$

$\frac{2}{4}$

$\frac{3}{6}$

$\frac{4}{\quad}$

$\frac{12}{18}$

$\frac{10}{15}$

$\frac{8}{\quad}$

4

$\frac{3}{5}$

$\frac{6}{10}$

$\frac{9}{\quad}$

$\frac{8}{24}$

$\frac{7}{21}$

$\frac{6}{\quad}$
