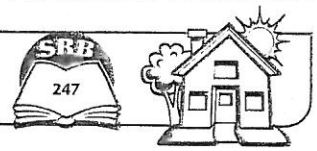
Name Date Time

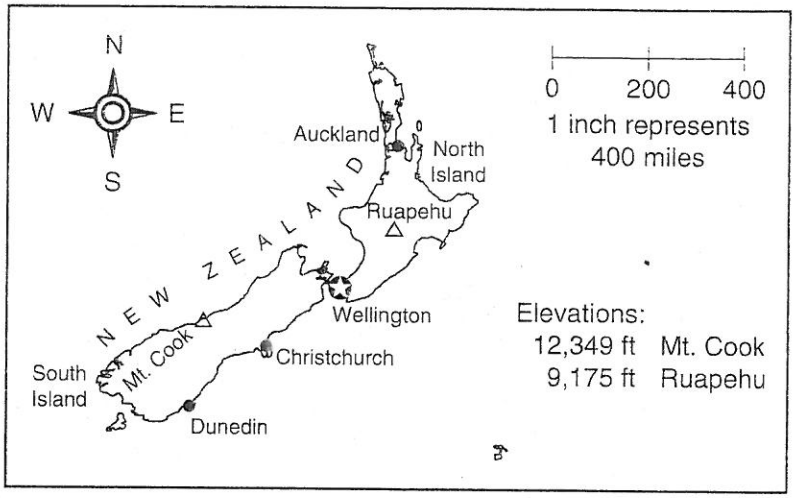
STUDY LINK 2•1

Estimation



Class Medians for: Step Length _____ Steps in 1 Minute _____

A group of fifth-grade students in New Zealand are going camping. They will hike from Wellington to Ruapehu. Then they will follow a trail for another $\frac{1}{2}$ mile to their campsite. Use the map on this page (Scale: 1 inch = 400 miles) as well as your class median step length, and number of steps in 1 minute, to make the following estimates. (*Reminder:* 1 mile = 5,280 feet)



1. About how many miles is it from Wellington to Ruapehu? _____ (unit)

2. About how many miles is it from Wellington to the campsite? _____ (unit)

3. About how long would it take the students to arrive at their campsite, if they don't make any stops? _____ (unit)

4. Each day, the students will hike for 12 hours and take 12 hours for stops to eat, rest, and sleep. If they leave at 7:00 A.M. on a Monday morning, at about what time, and on what day would you expect them to arrive at their campsite?

   Time: About _____ Day: _____

Try This

5. Suppose the students take a bus from Wellington to Mt. Cook and then hike to a campsite at the top of the mountain. Would they have to hike more or less than the distance they hiked to their campsite at Ruapehu?

Practice

6. 48 * 15 = _____

7. 24,029 + 26,840 + 39,492 = _____

8. 36 / 3 = _____

9. 35 − 17 = _____

Name Date Time

STUDY LINK 2·2

Number Hunt

Reminder: A  means *Do not use a calculator.*

Use the numbers in the following table to answer the questions below. You may not use a number more than once.

19	85.2	533	571
88.2	525	20	17.5
400	261	20.5	125
7	23	901	30

1. Circle two numbers whose sum is 832.
2. Make an X in the boxes containing three numbers whose sum is 57.
3. Make a check mark in the boxes containing two prime numbers whose sum is 42.
4. Make a star in the boxes containing two numbers whose sum is 658.
5. Make a triangle in the boxes containing two numbers whose sum is 105.7. Explain how you found the answer.

Solve Problems 6–9 using any method you want. Show your work in the space below.

6. 3,804 + 768 = _____
7. 2.83 + 1.57 = _____
8. 33 + 148 + 65 = _____
9. 1.055 + 0.863 = _____

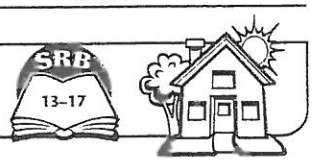
Practice

10. 73 − 26 = _____
11. 727 − 519 = _____
12. 27 ÷ 9 = _____
13. $4\overline{)34}$ → _____

Name Date Time

STUDY LINK 2·3

Another Number Hunt



Use the numbers in the following table to answer the questions below.
You may not use a number more than once.

17	15	9	75.03
100.9	803	25	451
1,500	5,000	1	3,096
299	703	75.3	40.03

1. Circle two numbers whose difference is 152.

2. Make an X in the boxes of two numbers whose difference is 25.6.

3. Make a check mark in the boxes of two numbers whose difference is greater than 1,000.

4. Make a star in the boxes of two numbers whose difference is less than 10.

5. Make a triangle in the boxes of two numbers whose difference is equal to the sum of 538 and 259.

6. Use diagonal lines to shade the boxes of two numbers whose difference is equal to 4^2.

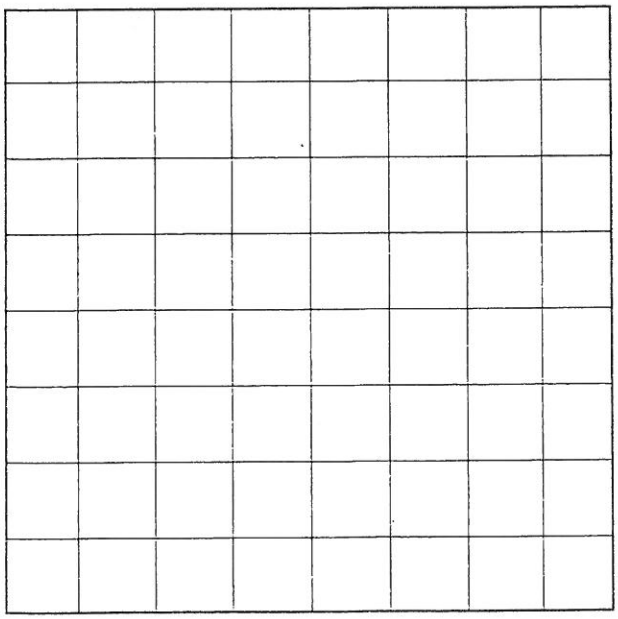
Subtract. Show your work for one problem on the grid below.

7. 247 − 186 = _____

8. _____ = 405 − 268

9. 24.5 − 18.7 = _____

10. _____ = 62.7 − 43.85



Practice

11. 48 ÷ 8 = _____

12. 81,447 + 2,571 = _____

13. $451.17 + $2.81 = _____

14. 14 * 7 = _____

15. 98 ÷ 7 = _____

Name _____ Date _____ Time _____

STUDY LINK 2•4

Open Sentences and Number Stories

Read each problem. Fill in the blanks and solve the problem.

SRB 223

1. Althea and her brother collect baseball cards. Althea has 148 cards. Her brother has 127 cards. How many cards do they have altogether?

   a. List the numbers needed to solve the problem. _____

   b. Describe what you want to find. _____

   c. Open number sentence: _____

   d. Solution: _____ e. Answer: _____ (unit)

2. Mark bought a hamburger for $3.89 and a drink for $1.49. If he paid with a $20 bill, how much change did he receive?

   a. List the numbers needed to solve the problem. _____

   b. Describe what you want to find. _____

   c. Open number sentence: _____

   _____

   d. Solution: _____ e. Answer: _____ (unit)

3. Fran has four pieces of ribbon. Each piece of ribbon is a different length: 0.6 meters long, 1.15 meters long, 1.35 meters long, and 0.925 meters long. How many meters of ribbon does Fran have in all?

   a. List the numbers needed to solve the problem.

   _____

   b. Describe what you want to find. _____

   c. Open number sentence:

   _____

   d. Solution: _____

   e. Answer: _____ (unit)

Name Date Time

STUDY LINK 2•5

Comparing Reaction Times

Use your Grab-It Gauge. Collect reaction-time data from two people at home. At least one of these people should be an adult.

1.

Person 1	
Left	Right

2.

Person 2	
Left	Right

3. Median times:

Left hand _____

Right hand _____

4. Median times:

Left hand _____

Right hand _____

5. How do the results for the two people compare to your class data?

_____

_____

_____

Practice

6. 2,683 + 2,939 = _____

7. 3,702 * 8 = _____

8. 604 − 86 = _____

9. 39 ÷ 3 = _____

Name Date Time

STUDY LINK 2•6

How Likely Is Rain?

Many years ago, weather reports described the chances of rain with phrases such as *very likely, unlikely,* and *extremely unlikely.* Today, the chances of rain are almost always reported as percents. For example, "There is a 50% chance of rain tonight."

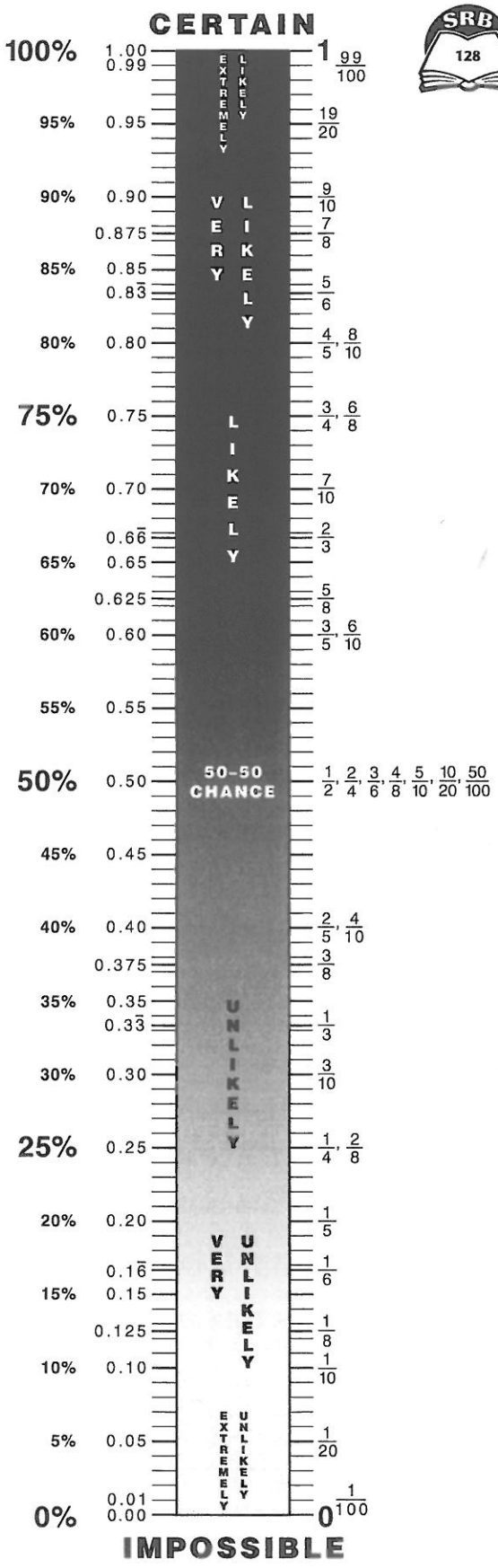
SRB 128

1. Use the Probability Meter Poster to translate phrases into percents.

Phrase	Percent
Unlikely	30%
Very likely	
Very unlikely	
Likely	
Extremely unlikely	

2. Use the Probability Meter Poster to translate percents into phrases.

Percent	Phrase
30%	Unlikely
5%	
99%	
20%	
80%	
35%	
65%	
45%	



Name Date Time

STUDY LINK 2·7

Magnitude Estimates

A **magnitude estimate** is a very rough estimate. It tells whether the exact answer falls in the tenths, ones, tens, hundreds, thousands, and so on. For each problem, make a magnitude estimate. Ask yourself: *Is the answer in the tenths, ones, tens, hundreds, thousands, or ten-thousands?* Circle the appropriate box. Do not solve the problems.

SRB 250

Example: 18 * 21

10s	(100s)	1,000s	10,000s

20 * 20 = 400

How I estimated

1. 73 * 28

10s	100s	1,000s	10,000s

How I estimated

2. 12 * 708

10s	100s	1,000s	10,000s

How I estimated

3. 98 * 105

10s	100s	1,000s	10,000s

How I estimated

4. 17 * 2.2

10s	100s	1,000s	10,000s

How I estimated

5. 2.6 * 3.9

0.1s	1s	10s	100s

How I estimated

Try This

6. Use the digits 4, 5, 6, and 8. Make as many factor pairs as you can that have a product between 3,000 and 5,000. Use a calculator to solve the problems.

Name Date Time

STUDY LINK 2•8

Estimating and Multiplying

- For each problem, make a magnitude estimate.
- Circle the appropriate box. Do not solve the problem.
- Then choose 3 problems to solve. Show your work on the grid.

SRB 247

1. 8 * 19 _____

10s	100s	1,000s	10,000s

How I estimated

2. 155 * 6 _____

10s	100s	1,000s	10,000s

How I estimated

3. 37 * 58 _____

10s	100s	1,000s	10,000s

How I estimated

4. 5 * 4.2 _____

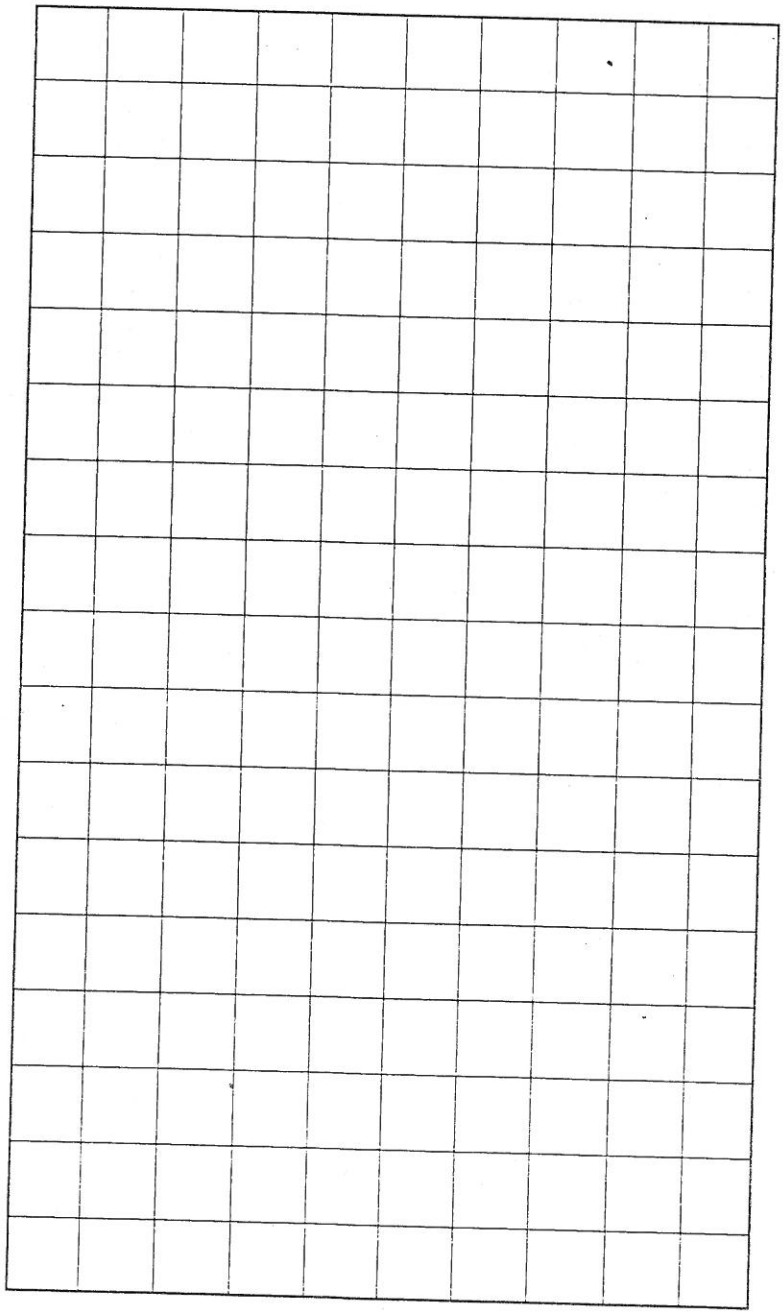
10s	100s	1,000s	10,000s

How I estimated

5. 9.3 * 2.8 _____

10s	100s	1,000s	10,000s

How I estimated



Name Date Time

STUDY LINK 2•9

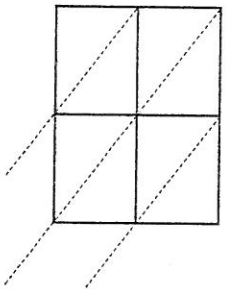
Multiply with the Lattice Method

For each problem:

- Make a magnitude estimate. Circle the appropriate box.
- Solve using the lattice method. Show your work in the grids.

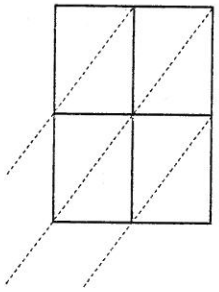
1. $94 * 73 =$ _____

10s	100s	1,000s	10,000s



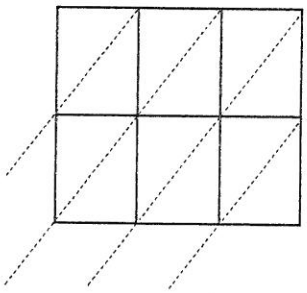
2. $24 * 3.7 =$ _____

0.1s	1s	10s	100s



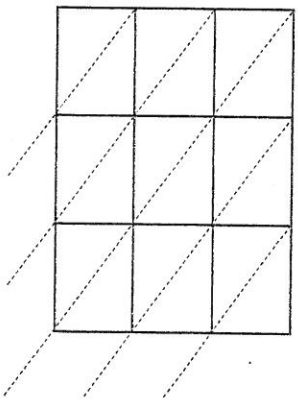
3. $5.4 * 6.18 =$ _____

0.1s	1s	10s	100s



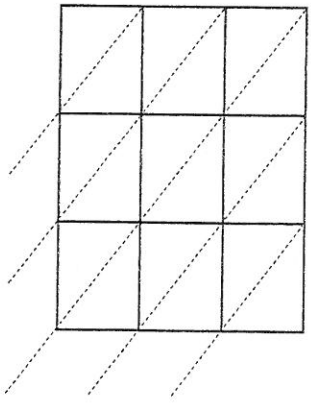
4. $384 * 261 =$ _____

100s	1,000s	10,000s	100,000s



5. $17.7 * 19.3 =$ _____

0.1s	1s	10s	100s



Practice

6. $7{,}402 + 2{,}587 =$ _____

7. $37 \div 7 \rightarrow$ _____

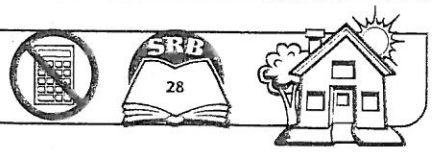
8. $328 - 237 =$ _____

9. $\$15.75 + \$3.25 =$ _____

Name Date Time

STUDY LINK 2•10

Place-Value Puzzles



Millions			Thousands			Ones		
Hundred-millions	Ten-millions	Millions	Hundred-thousands	Ten-thousands	Thousands	Hundreds	Tens	Ones

Use the clues to solve the puzzles.

Puzzle 1

- The value of the digit in the **thousandths** place is equal to the sum of the measures of the angles in a triangle (180°) divided by 30.
- If you multiply the digit in the **tens** place by 1,000; the answer will be 9,000.
- Double 35. Divide the result by 10. Write the answer in the **tenths** place.
- The **hundreds**-place digit is $\frac{1}{2}$ the value of the digit in the thousandths place.
- When you multiply the digit in the **ones** place by itself, the answer is 0.
- Write a digit in the **hundredths** place so that the sum of all six digits in this number is 30.

What is the number? _____ _____ _____ . _____ _____ _____

Puzzle 2

- Double 12. Divide the result by 8. Write the answer in the **thousands** place.
- If you multiply the digit in the **hundredths** place by 10, your answer will be 40.
- The **tens**-place digit is a prime number. If you multiply it by itself, the answer is 49.
- Multiply 7 and 3. Subtract 12. Write the answer in the **thousandths** place.
- Multiply the digit in the hundredths place by the digit in the thousands place. Subtract 7 from the result. Write the digit in the **tenths** place.
- The digit in the **ones** place is an odd digit that has not been used yet.
- The value of the digit in the **hundreds** place is the same as the number of sides of a quadrilateral.

What is the number? _____, _____ _____ _____ . _____ _____ _____

Check: The sum of the answers to both puzzles is 3,862.305.

Practice

3. 7,772 + 1,568 = _____

4. 472 − 228 = _____

5. 826 * 54 = _____

6. 59 / 3 → _____