ELIZABETH PUBLIC SCHOOLS

THINK • LEARN • ACHIEVE • CARE

**Olga Hugelmeyer**
Superintendent of Schools

**Theodore Panagopoulos**
Principal

Dear Students, Parents & Guardians:

We hope the summer months provide some special family time and rest as we prepare for 4th grade at Terence C. Reilly Gifted and Talented School No. 7! To better equip each student for the upcoming school year, below is a list of supplies for incoming 4th graders:

*Each student must have the items listed below at school in* ***every class, every day****. Please label every item clearly with permanent marker, and* ***ensure you have enough supplies to last the entire school year****.*

**Individual Supplies**

- ▫ USB
- ▫ Headphones or ear buds
- ▫ 4 two pocket folders (3 hole punched) Science, Social Studies, Math, English Language Arts
- ▫ 24 Ticonderoga, #2 pencils
- ▫ Individual erasers
- ▫ 1 personal pencil sharpener with a container
- ▫ Thin Line Dry erase markers (red, black, blue and green only)
- ▫ 1 box of pens (black or blue only)
- ▫ 2 highlighters (yellow)
- ▫ 4 packs of Post It notes
- ▫ 7 marble notebooks-Note: ELA needs 1 marble notebook for each marking period (4 total and 1 for writing), Math needs 2
- ▫ Index cards
- ▫ Tape, glue sticks, scissors, ruler, protractor
- ▫ Markers, crayons, or colored pencils

**Health and Wellness Items:** 3 boxes of Kleenex, 1 bottle of hand sanitizer, 1 container of anti-bacterial wipes

**Home Supplies:**
*In addition to the above, you should have the following supplies at home as well for projects and other assignments:*

- ▫ Markers, crayons, or colored pencils
- ▫ Tape, glue sticks, scissors, ruler, protractor Dictionary/ Thesaurus
- ▫ Poster board/ Construction paper
- ▫ **Computer with Internet access and printer capability**

- ☐ **Library Card** (If you do not already have one, please obtain a library card for your child and encourage him/her to use your local library for school work).

Keep a look out for weekly penny, nickel, and dollar deals at the following stores throughout the summer, specifically during July and August:

- Staples
- Wal-Mart/Target
- Dollar Store
- Office Depot



436 First Avenue, Elizabeth, New Jersey 07206 • Ph: 908.436.6030 • Fax: 908.436.6012
Email: panagoth@epsnj.org • Website: epsnj.org/reilly

ELIZABETH PUBLIC SCHOOLS

*Every child, Achieving Excellence*

Fourth grade is a big year for students at Terence C. Reilly. After a virtual learning experience during a global pandemic, this will be an even bigger year. Traditionally, the transition to fourth grade requires students to adapt to a more rigorous schedule, switching classes for all subject areas, and engaging in an accelerated math program. They will have different teachers with varying expectations. Please help your child(ren) with organization and time-management as they are crucial skills for our learners. Together, as parents and teachers, the incoming fourth graders will have a solid support system at home and at school.

We look forward to the 2020-2021 school year!

Sincerely,

The Fourth Grade Team

**Terence C. Reilly School No. 7**

436 First Avenue, Elizabeth, New Jersey 07206 • Ph: 908.436.6030 • Fax: 908.436.6012
Email: panagoth@epsnj.org • Website: epsnj.org/reilly

ELIZABETH PUBLIC SCHOOLS

*Every child, Achieving Excellence*

**Summer Assignment**

Dear Students, Parents & Guardians:

We hope the summer months provide some special family time and rest as we prepare for 4th grade at Terence C. Reilly Gifted and Talented School No. 7! To better prepare each student for the upcoming school year students should have good organizational skills, be prepare with needed supplies, and check PowerSchool weekly, this will contribute to a smooth transition into fourth grade. Your 4th grade teachers anticipate an exciting year filled with new adventures and fantastic learning experiences. Let's work together to make sure your child gets everything he or she needs to be successful in the 2019-2020 school year!

**It is imperative for your child to prepare themselves for the upcoming school year. To have a successful school year in the 4th grade it is a necessity for your child to complete the following:**

**Social Studies:**
**Fourth Grade will first concentrate on maps, latitude and longitude, landforms.**

- It would be very helpful if you introduce this topic to your child and perhaps select coordinates as a game, such as "40° N, 74° W, which are the coordinates for Elizabeth. (Suggestion: The game Battleship is a great for this.)

- Students should be prepared to memorize three major historical introductions.

**Science:**
Students will learn about Soil, Rocks and Landforms, Energy and Environments.
• Any trips to the park, zoo, beach or museums are great to help students connect to the content they will be learning next year. Even thinking about how a television, car or iPad works is a good introduction. Feel free to look up information and videos on any of these topics.

**Spanish**
**Novice High(Intermediate students)-** Students are to pick a book in Spanish and do a book report. The book report should include the students first and last name, date, and my name (Señora Jerez). It should include the tittle of the book, author and illustrator. Students are going to write one to two paragraphs about what they've read. Students should include why they choose the book they did and make a connection to the book. The report needs to be typed and the students should include one to two pictures that's related to the book. This assignment will be due the second week of school. This assignment will be considered a project for the 1st marking period.

**Novice Students(beginners)**. Students are going to research 12 cognates and write simple sentences in Spanish. I've explained to the students' what cognates are in class. Students are encouraged to use their Spanish notebooks and used cognates that I gave them in the lessons I taught throughout the year. They need to type their sentences and underline the cognates they use in the sentences. The students need to write their first and last name, my name, and the title is Cognados. Students should add pictures related to the sentences they wrote. This assignment will be collected the second week of school. This assignment will be considered a project for the 1st marking period.

ELIZABETH PUBLIC SCHOOLS

*Every Child, Achieving Excellence*

**LAL**

Dear incoming 4th graders, June 2019

We look forward to an exciting year, full of wonderful new experiences!

As your Summer Reading Assignment, you will be required to create a Book Talk Presentation.

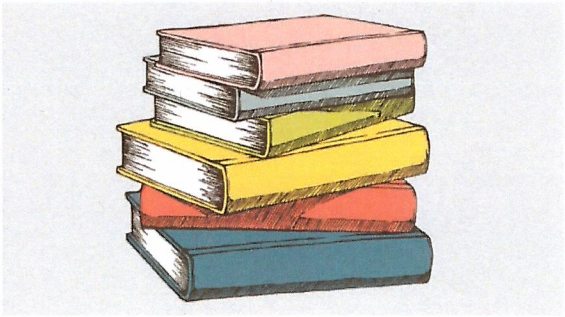
Here are the requirements:

- ✓ Select any (grade level appropriate) book of your choice.
- ✓ Read the book.
- ✓ Prepare your Book Talk Presentation (see attached sheet for details and grading rubric)
- ✓ Be ready to present your Book Talk during the first week of school.
- ✓ Bring the book with you for the presentation.

Note: This assignment will count as the first test grade for English/Language Arts. Do your best and start off the year right!

We look forward to hearing all of your awesome presentations!

Sincerely,
Mrs. McHugh & Mrs. Calisto
4th Grade English/Language Arts Teachers



**Terence C. Reilly School No. 7**

436 First Avenue, Elizabeth, New Jersey 07206 • Ph: 908.436.6030 • Fax: 908.436.6012
Email: panagoth@epsnj.org • Website: epsnj.org/reilly

ELIZABETH PUBLIC SCHOOLS

*Every child, Achieving Excellence*

# How to Rock a Book Talk

## The No-Pain Way to Give a Presentation

**Do:**
Choose a worthy book.
Intrigue your listeners.
Read a passage aloud.
Draw attention to the best parts.
Show the book.

**Don't:**
Spoil the ending.
Book talk a book that you didn't like.
Book talk a book you haven't read.
Summarize the entire plot.
Talk too much…leave them curious!

## The Formula

**The Book:**
Title
Author
Genre

+

**The Hook:**
Find the most exciting passage in the book and read it aloud.

+

**The Quick Look**
Plot
Characters
Setting
Conflict
Reasons to read it

## Tips for Great Presentations:

**Be calm.** Try to speak in a natural and friendly voice.

**Be honest**. Book talks are about sharing great books. Tell your audience what you liked best about your book! And don't share one you didn't like or haven't read.

**Be resourceful.** Ask your teachers, parents, or librarian to help with ideas.

**Be prepared.** Practice your presentation! You can make notes to help you remember what you want to say.

**Terence C. Reilly School No. 7**

436 First Avenue, Elizabeth, New Jersey 07206 • Ph: 908.436.6030 • Fax: 908.436.6012
Email: panagoth@epsnj.org • Website: epsnj.org/reilly

ELIZABETH PUBLIC SCHOOLS

*Every child, Achieving Excellence*

# Book Talk Rubric

Name _____ Date _____ Book _____

| | Fair – 2 Points | Good – 3 Points | Excellent – 5 Points | Points earned: |
|---|---|---|---|---|
| **Information:** Did you include the title of the book, the author's name, and genre? | Very little information. We don't really know what book you are describing. | Most information included. We get the general idea. | Everything is included! We know exactly what book you are describing. | |
| **Details:** Did you explain the plot, describe key characters, and mention the setting? | Only 1 or 2 details are included. We have no idea what your book is about. | Most details included, but not all. We basically understand your book. | All details explained. We can easily picture the details in our heads. | |
| **Sell it:** Did you make the information exciting, and make the class want to read your book? | Very little effort to "sell" the book. We might be yawning. | A good amount of selling, but we still might not be that interested. | Excellent selling! Your book sounds exciting, and WE.MUST.READ.IT.NOW. | |
| **Grammar:** Did you write everything with great grammar and excellent sentences? | More than 4 grammar errors. | 2 or 3 grammar errors. | 0-1 grammar errors. | |

**Total Points Earned:**

**Terence C. Reilly School No. 7**

436 First Avenue, Elizabeth, New Jersey 07206 • Ph: 908.436.6030 • Fax: 908.436.6012
Email: panagoth@epsnj.org • Website: epsnj.org/reilly

ELIZABETH PUBLIC SCHOOLS

*Every child, Achieving Excellence*

**Math:**

Incoming 4th graders must know the basic multiplication and division facts 1 – 12 as well as how to add, subtract, multiply and divide whole numbers.

- Students should practice their multiplication facts by taking a timed 3 minute 50 Facts Test. (See the attached 50 Facts Test pages)

- Students should practice applying addition and subtraction strategies (See the attached worksheets)
  -Addition Strategies: Column Addition, Partial Sums, and US Tradition Addition (Standard)
  -Subtraction Strategies: Partial Differences and US Tradition Subtraction (Standard)

- Students should practice applying multiplication and division strategies (See the attached worksheets)
  -Multiplication Strategies: Lattice, Partial Products and US Traditional Multiplication
  -Division Strategies: Partial Quotient and US Traditional Long Division

**Please provide your child with a notebook and have him/her complete all practice problems in it showing their work. Students should write any questions that come to mind in the margin as they are practicing.**

***(If your child experiences difficulty when working with the strategies, there are instructional videos on YouTube and Khan Academy which can help)**

***Students will be given a diagnostic test on the strategies for addition, subtraction, multiplication and division during the first full week of school during math class.**

**Terence C. Reilly School No. 7**

436 First Avenue, Elizabeth, New Jersey 07206 • Ph: 908.436.6030 • Fax: 908.436.6012
Email: panagoth@epsnj.org • Website: epsnj.org/reilly

ELIZABETH PUBLIC SCHOOLS

*Every child, Achieving Excellence*

## 50-Facts Test 1

| | | | |
|---|---|---|---|
| 7 * 7 = _____ | 9 * 8 = _____ | 5 * 8 = _____ | 5 * 7 = _____ |
| 5 * 6 = _____ | 4 * 7 = _____ | 5 * 3 = _____ | 5 * 2 = _____ |
| 3 * 8 = _____ | 2 * 0 = _____ | 7 * 8 = _____ | 9 * 4 = _____ |
| 7 * 9 = _____ | 4 * 9 = _____ | 6 * 4 = _____ | 6 * 9 = _____ |
| 0 * 4 = _____ | 1 * 0 = _____ | 3 * 9 = _____ | 8 * 9 = _____ |
| 6 * 6 = _____ | 2 * 7 = _____ | 7 * 6 = _____ | 7 * 3 = _____ |
| 4 * 5 = _____ | 8 * 4 = _____ | 5 * 5 = _____ | 5 * 4 = _____ |
| 3 * 5 = _____ | 8 * 2 = _____ | 9 * 9 = _____ | 9 * 7 = _____ |
| 9 * 5 = _____ | 2 * 6 = _____ | 7 * 2 = _____ | 9 * 6 = _____ |
| 4 * 1 = _____ | 4 * 8 = _____ | 2 * 9 = _____ | 8 * 7 = _____ |
| 2 * 4 = _____ | 8 * 6 = _____ | 4 * 4 = _____ | 7 * 5 = _____ |
| 5 * 9 = _____ | 6 * 5 = _____ | 8 * 8 = _____ | 3 * 3 = _____ |
| 4 * 3 = _____ | 6 * 3 = _____ | | |

**Terence C. Reilly School No. 7**

436 First Avenue, Elizabeth, New Jersey 07206 • Ph: 908.436.6030 • Fax: 908.436.6012
Email: panagoth@epsnj.org • Website: epsnj.org/reilly

ELIZABETH PUBLIC SCHOOLS

*Every child, Achieving Excellence*

## 50-Facts Test 2

| | | | |
|---|---|---|---|
| 6 * 6 = | 4 * 7 = | 8 * 3 = | 7 * 7 = |
| 5 * 0 = | 4 * 2 = | 6 * 5 = | 6 * 9 = |
| 4 * 4 = | 5 * 8 = | 5 * 5 = | 4 * 6 = |
| 6 * 3 = | 5 * 9 = | 9 * 8 = | 3 * 6 = |
| 8 * 7 = | 2 * 5 = | 8 * 2 = | 9 * 5 = |
| 2 * 7 = | 8 * 8 = | 7 * 8 = | 9 * 9 = |
| 4 * 9 = | 4 * 8 = | 8 * 6 = | 8 * 5 = |
| 5 * 3 = | 6 * 8 = | 9 * 7 = | 7 * 6 = |
| 8 * 1 = | 7 * 3 = | 3 * 3 = | 5 * 4 = |
| 3 * 8 = | 9 * 6 = | 7 * 5 = | 3 * 7 = |
| 7 * 9 = | 7 * 4 = | 9 * 4 = | 9 * 2 = |
| 6 * 7 = | 4 * 3 = | 4 * 5 = | 8 * 9 = |
| 3 * 5 = | 9 * 3 = | | |

**Terence C. Reilly School No. 7**

436 First Avenue, Elizabeth, New Jersey 07206 • Ph: 908.436.6030 • Fax: 908.436.6012
Email: panagoth@epsnj.org • Website: epsnj.org/reilly

ELIZABETH PUBLIC SCHOOLS

*Every child, Achieving Excellence*

## 50-Facts Test 3

| | | | |
|---|---|---|---|
| 2 * 0 = | 6 * 9 = | 4 * 6 = | 9 * 2 = |
| 3 * 3 = _____ | 7 * 6 = _____ | 9 * 3 = _____ | 7 * 9 = _____ |
| 5 * 7 = _____ | 6 * 5 = _____ | 5 * 6 = _____ | 5 * 9 = _____ |
| 5 * 5 = | 8 * 6 = | 3 * 7 = | 9 * 4 = |
| 4 * 8 = _____ | 7 * 2 = _____ | 9 * 5 = _____ | 4 * 5 = _____ |
| 4 * 4 = _____ | 2 * 6 = _____ | 9 * 9 = _____ | 6 * 8 = _____ |
| 3 * 9 = | 9 * 7 = | 8 * 5 = | 6 * 3 = |
| 2 * 4 = | 6 * 7 = | 2 * 3 = | 3 * 8 = |
| 9 * 6 = _____ | 1 * 1 = _____ | 7 * 7 = _____ | 4 * 7 = _____ |
| 8 * 7 = _____ | 8 * 4 = _____ | 7 * 5 = _____ | 5 * 4 = _____ |
| 9 * 8 = | 8 * 8 = | 6 * 4 = | 6 * 6 = |
| 3 * 5 = | 8 * 9 = | 7 * 8 = | 3 * 6 = |
| 3 * 4 = | 8 * 3 = | | |

**Terence C. Reilly School No. 7**

436 First Avenue, Elizabeth, New Jersey 07206 • Ph: 908.436.6030 • Fax: 908.436.6012
Email: panagoth@epsnj.org • Website: epsnj.org/reilly

ELIZABETH PUBLIC SCHOOLS

*Every child, Achieving Excellence*

## 50-Facts Test 4

| | | | |
|---|---|---|---|
| 4 * 8 = _____ | 7 * 5 = _____ | 9 * 9 = _____ | 7 * 6 = _____ |
| 3 * 7 = _____ | 4 * 9 = _____ | 5 * 7 = _____ | 3 * 4 = _____ |
| 6 * 6 = _____ | 5 * 8 = _____ | 8 * 5 = _____ | 4 * 5 = _____ |
| 8 * 3 = _____ | 1 * 3 = _____ | 6 * 8 = _____ | 8 * 8 = _____ |
| 6 * 9 = _____ | 7 * 9 = _____ | 4 * 4 = _____ | 9 * 4 = _____ |
| 2 * 4 = _____ | 9 * 8 = _____ | 7 * 4 = _____ | 9 * 6 = _____ |
| 4 * 6 = _____ | 2 * 8 = _____ | 8 * 9 = _____ | 7 * 3 = _____ |
| 7 * 0 = _____ | 5 * 5 = _____ | 9 * 7 = _____ | 2 * 9 = _____ |
| 9 * 3 = _____ | 3 * 1 = _____ | 1 * 1 = _____ | 6 * 4 = _____ |
| 6 * 7 = _____ | 8 * 6 = _____ | 5 * 9 = _____ | 3 * 6 = _____ |
| 2 * 5 = _____ | 1 * 0 = _____ | 5 * 6 = _____ | 6 * 2 = _____ |
| 4 * 3 = _____ | 3 * 5 = _____ | 7 * 7 = _____ | 8 * 7 = _____ |
| 4 * 7 = _____ | 7 * 2 = _____ | | |

**Terence C. Reilly School No. 7**

436 First Avenue, Elizabeth, New Jersey 07206 • Ph: 908.436.6030 • Fax: 908.436.6012
Email: panagoth@epsnj.org • Website: epsnj.org/reilly

Name _____ Date _____ Time _____

## Partial-Sums Addition

FOCUS ALGORITHM

Add one place-value column at a time.
Write each partial sum below the problem.
Then add all the partial sums to find the final sum.



**Example 1**

| | | | | |
|---|---|---|---|---|
| | | | | 835 |
| | | | | + 243 |
| Add the hundreds. | → | *(800 + 200)* | → | 1,000 |
| Add the tens. | → | *(30 + 40)* | → | 70 |
| Add the ones. | → | *(5 + 3)* | → | + 8 |
| Add the partial sums. | → | *(1,000 + 70 + 8)* | → | **1,078** |

**Example 2**

| | | | | |
|---|---|---|---|---|
| | | | | 945 |
| | | | | + 468 |
| Add the hundreds. | → | *(900 + 400)* | → | 1,300 |
| Add the tens. | → | *(40 + 60)* | → | 100 |
| Add the ones. | → | *(5 + 8)* | → | + 13 |
| Add the partial sums. | → | *(1,300 + 100 + 13)* | → | **1,413** |



### Check Your Understanding

Solve the following problems.

**1.** 405 + 377 **2.** 811 + 463 **3.** 931 + 850

**4.** 809 + 299 **5.** 912 + 756 **6.** 257 + 789

**7.** 3,098 + 234 **8.** 4,078 + 706

Write your answers on a separate sheet of paper.



**Terence C. Reilly School No. 7**

436 First Avenue, Elizabeth, New Jersey 07206 • Ph: 908.436.6030 • Fax: 908.436.6012
Email: panagoth@epsnj.org • Website: epsnj.org/reilly

Name Date Time

FOCUS ALGORITHM

# Partial-Sums Addition

Add one place-value column at a time.
Write each partial sum below the problem.
Then add all the partial sums to find the final sum.

Addition

## Example 1

Show Me

| | | | | |
|---|---|---|---|---|
| | | | | 6,089 |
| | | | | + 7,825 |
| Add the thousands. | → | *(6,000 + 7,000)* | → | 13,000 |
| Add the hundreds. | → | *(0 + 800)* | → | 800 |
| Add the tens. | → | *(80 + 20)* | → | 100 |
| Add the ones. | → | *(9 + 5)* | → | + 14 |
| Add the partial sums. | → | *(13,000 + 800 + 100 + 14)* | → | **13,914** |

## Example 2

| | | | | |
|---|---|---|---|---|
| | | | | 9,838 |
| | | | | + 7,399 |
| Add the thousands. | → | *(9,000 + 7,000)* | → | 16,000 |
| Add the hundreds. | → | *(800 + 300)* | → | 1,100 |
| Add the tens. | → | *(30 + 90)* | → | 120 |
| Add the ones. | → | *(8 + 9)* | → | + 17 |
| Add the partial sums. | → | *(16,000 + 1,100 + 120 + 17)* | → | **17,237** |

## Check Your Understanding

Solve the following problems.

**1.** 4,397 + 1,158 **2.** 3,066 + 2,583 **3.** 5,932 + 4,059

**4.** 8,675 + 3,009 **5.** 4,598 + 2,094 **6.** 9,362 + 6,256

**7.** 23,409 + 2,967 **8.** 9,458 + 5,371 + 6,798



Write your answers on a separate sheet of paper.



Terence C. Reilly School No. 7
436 First Avenue, Elizabeth, New Jersey 07206 • Ph: 908.436.6030 • Fax: 908.436.6012
Email: panagoth@epsnj.org • Website: epsnj.org/reilly

Name _____ Date _____ Time _____

# Column Addition

Add one place-value column at a time. Write each place-value answer directly beneath the problem. Then go back and adjust each place-value answer, if necessary, one column at a time.

**Example 1**

| | | | |
|---|---|---|---|
| | 2 | 6 | 8 |
| + | 4 | 8 | 3 |

| | | | |
|---|---|---|---|
| Add the digits in each column. → | 6 | 14 | 11 |
| If necessary, adjust the hundreds and the tens. → | 7 | 4 | 11 |
| If necessary, adjust the tens and the ones. → | **7** | **5** | **1** |

**Example 2**

| | | | |
|---|---|---|---|
| | 9 | 6 | 7 |
| + | 4 | 9 | 5 |

| | | | |
|---|---|---|---|
| Add the digits in each column. → | 13 | 15 | 12 |
| If necessary, adjust the hundreds and the tens. → | 14 | 5 | 12 |
| If necessary, adjust the tens and the ones. → | **1, 4** | **6** | **2** |



## Check Your Understanding

Solve the following problems.

**1.** 511 + 764 **2.** 703 + 118 **3.** 303 + 279

**4.** 442 + 471 **5.** 453 + 629 **6.** 862 + 290

**7.** 1,859 + 767 **8.** 1,095 + 2,817 + 4,436

Write your answers on a separate sheet of paper.



Terence C. Reilly School No. 7
436 First Avenue, Elizabeth, New Jersey 07206 • Ph: 908.436.6030 • Fax: 908.436.6012
Email: panagoth@epsnj.org • Website: epsnj.org/reilly

Name _____ Date _____ Time _____

## U.S. Traditional Addition (Standard)

Begin adding on the right, and then move to the left. Regroup each partial answer, if necessary, by writing each digit in the appropriate place-value column.

**Example** Show Me

```
  398
+ 427
```

Add the ones. *(8 ones + 7 ones = 15 ones)* → 
Regroup. *(15 ones = 1 ten + 5 ones)*

```
  1
  398
+ 427
    5
```

Add the tens. *(1 ten + 9 tens + 2 tens = 12 tens)* →
Regroup. *(12 tens = 1 hundred + 2 tens)*

```
 1 1
  398
+ 427
   25
```

Add the hundreds. *(1 hundred + 3 hundreds + 4 hundreds = 8 hundreds)* →

```
 1 1
  398
+ 427
  825
```

**825** is the total.



### Check Your Understanding

Solve the following problems.

**1.** 582 + 19 **2.** 748 + 190 **3.** 856 + 99

**4.** 307 + 216 **5.** 236 + 575 **6.** 8,163 + 495

**7.** 2,641 + 1,979 **8.** 5,219 + 3,487 + 7,569

Write your answers on a separate sheet of paper.



**Terence C. Reilly School No. 7**
436 First Avenue, Elizabeth, New Jersey 07206 • Ph: 908.436.6030 • Fax: 908.436.6012
Email: panagoth@epsnj.org • Website: epsnj.org/reilly

Name _____ Date _____ Time _____

## Partial-Differences Subtraction

Subtract left to right, one column at a time. In some cases, the larger number is on the bottom. When this happens and you subtract, the difference is a negative number.

**Example** Show Me

First, write or think of 5,170 as 5,000 + 100 + 70 + 0.

9,328 (minuend)
− 5,170 (subtrahend)

9,328
− 5,170

| | | | |
|---|---|---|---|
| Subtract the thousands. | → *(9,000 − 5,000)* | → | 4,000 |
| Subtract the hundreds. | → *(300 − 100)* | → | 200 |
| Subtract the tens. | → *(20 − 70)* | → | − 50 |
| Subtract the ones. | → *(8 − 0)* | → | 8 |
| Find the total. | → *(4,000 + 200 − 50 + 8)* | → | **4,158** |



### Check Your Understanding

Solve the following problems.

**1.** 317 − 94 **2.** 582 − 16 **3.** 640 − 279

**4.** 835 − 624 **5.** 7,104 − 536 **6.** 2,952 − 2,184

**7.** 43,870 − 1,691 **8.** 15,033 − 10,584

Write your answers on a separate sheet of paper.



Terence C. Reilly School No. 7
436 First Avenue, Elizabeth, New Jersey 07206 • Ph: 908.436.6030 • Fax: 908.436.6012
Email: panagoth@epsnj.org • Website: epsnj.org/reilly

Name _____ Date _____ Time _____

# U.S. Traditional Subtraction (Standard)

FOCUS ALGORITHM

Start with the ones column, and subtract one column at a time. Regroup (rename) as necessary.

## Example 1

**Think:** Can I subtract 9 ones from 5 ones? (no)
**Regroup** the 5 tens and 5 ones as 4 tens and 15 ones.
Then **subtract** 9 ones from 15 ones.

$$\begin{array}{r} {}^{4}\cancel{8}\,{}^{15}\cancel{5}\,\cancel{5} \\ -\ 4\,3\,9 \\ \hline 4\,1\,6 \end{array}$$

**Think:** Can I subtract 3 tens from 4 tens? (yes)
**Subtract** 3 tens from 4 tens.
Then **subtract** the hundreds.

**416** is the difference.

## Example 2

**Think:** Can I subtract 6 ones from 2 ones? (no)
**Regroup** the 7 hundreds and 0 tens as 6 hundreds and 10 tens. Then regroup the 10 tens and 2 ones as 9 tens and 12 ones.
Then **subtract** 6 ones from 12 ones.

$$\begin{array}{r} {}^{6}\cancel{7}\,{}^{9}\cancel{0}\,{}^{12}2 \\ -\ 5\,8\,6 \\ \hline 1\,1\,6 \end{array}$$

**Think:** Can I subtract 8 tens from 9 tens? (yes)
**Subtract** 8 tens from 9 tens.
Then **subtract** the hundreds.

**116** is the difference.

## Check Your Understanding

Solve the following problems.

**1.** 601 − 27 **2.** 815 − 74 **3.** 529 − 263

**4.** 7,195 − 856 **5.** 9,113 − 5,089 **6.** 1,248 − 1,199

**7.** 32,084 − 9,176 **8.** 15,643 − 12,897

Write your answers on a separate sheet of paper.





Terence C. Reilly School No. 7
436 First Avenue, Elizabeth, New Jersey 07206 • Ph: 908.436.6030 • Fax: 908.436.6012
Email: panagoth@epsnj.org • Website: epsnj.org/reilly

Name _____ Date _____ Time _____

## Lattice Multiplication

FOCUS ALGORITHM

Write one factor along the top of the grid. Write the other factor along the right side of the grid. Begin with the first digit from the side factor, and multiply each digit in the top factor by each digit in the side factor. Record each answer in its own cell, placing the tens digit in the upper half of the cell and the ones digit in the bottom half of the cell. Then add along each diagonal and record any regroupings as shown below.

***Example***

$26 \times 35$

**Multiply** 3 × 6. **Record** the product in the upper right-hand cell.

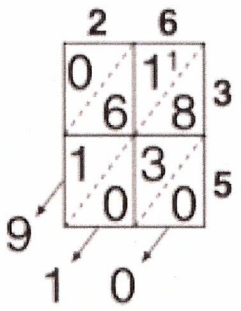
**Multiply** 3 × 2. **Record** the product in the upper left-hand cell.

**Multiply** 5 × 6. **Record** the product in the lower right-hand cell.

**Multiply** 5 × 2. **Record** the product in the lower left-hand cell.

**Add** along each diagonal beginning with the bottom right diagonal. Work toward the upper left diagonal. **Regroup** each tens digit to the top of the next diagonal (to help you remember to add that digit).

The product of **26** and **35** is **910.**






### Check Your Understanding

Solve the following problems.

**1.** 14 × 22 **2.** 44 ÷ 18 **3.** 65 ÷ 36

**4.** 82 ÷ 41 **5.** 73 × 52 **6.** 96 ÷ 28

**7.** 391 ÷ 45 **8.** 624 × 783

Write your answers on a separate sheet of paper.



**Terence C. Reilly School No. 7**

436 First Avenue, Elizabeth, New Jersey 07206 • Ph: 908.436.6030 • Fax: 908.436.6012
Email: panagoth@epsnj.org • Website: epsnj.org/reilly

Name _____ Date _____ Time _____

## Partial-Products Multiplication

FOCUS ALGORITHM

Multiply each digit in the bottom factor by each digit in the top factor. Then add all of the partial products to find the total product.

### Example 1

| | | 100s | 10s | 1s | |
|---|---|---|---|---|---|
| | | 2 | 4 | 5 | (factor) |
| | × | | | 9 | (factor) |
| Multiply 9 × 200. | → | 1 | 8 | 0 | 0 | |
| Multiply 9 × 40. | → | | 3 | 6 | 0 | |
| Multiply 9 × 5. | → | + | | 4 | 5 | |
| Add the partial products. | → | **2,** | **2** | **0** | **5** | (product) |

### Example 2

| | | 100s | 10s | 1s | |
|---|---|---|---|---|---|
| | | 7 | 4 | 2 | (factor) |
| | × | | | 5 | (factor) |
| Multiply 5 × 700. | → | 3 | 5 | 0 | 0 | |
| Multiply 5 × 40. | → | | 2 | 0 | 0 | |
| Multiply 5 × 2. | → | + | | 1 | 0 | |
| Add the partial products. | → | **3,** | **7** | **1** | **0** | (product) |



### Check Your Understanding

Solve the following problems.

**1.** 342 × 6 **2.** 903 × 4 **3.** 654 × 9

**4.** 793 × 5 **5.** 587 × 7 **6.** 464 × 3

**7.** 966 × 8 **8.** 8,527 × 5

Write your answers on a separate sheet of paper.



**Terence C. Reilly School No. 7**

436 First Avenue, Elizabeth, New Jersey 07206 • Ph: 908.436.6030 • Fax: 908.436.6012
Email: panagoth@epsnj.org • Website: epsnj.org/reilly

Name _____ Date _____ Time _____

FOCUS ALGORITHM

## Partial-Products Multiplication

Multiply each digit in the bottom factor by each digit in the top factor. Then add all of the partial products to find the total product.

### Example 1

| | | | 10s | 1s | |
|---|---|---|---|---|---|
| | | | 5 | 6 | (factor) |
| | × | | 8 | 2 | (factor) |
| Multiply 80 × 50. → | 4 | 0 | 0 | 0 | |
| Multiply 80 × 6. → | | 4 | 8 | 0 | |
| Multiply 2 × 50. → | | 1 | 0 | 0 | |
| Multiply 2 × 6. → | + | | 1 | 2 | |
| Add the partial products. → | **4,** | **5** | **9** | **2** | (product) |

### Example 2

| | | | 10s | 1s | |
|---|---|---|---|---|---|
| | | | 9 | 4 | (factor) |
| | × | | 7 | 6 | (factor) |
| Multiply 70 × 90. → | 6 | 3 | 0 | 0 | |
| Multiply 70 × 4. → | | 2 | 8 | 0 | |
| Multiply 6 × 90. → | | 5 | 4 | 0 | |
| Multiply 6 × 4. → | + | | 2 | 4 | |
| Add the partial products. → | **7,** | **1** | **4** | **4** | (product) |

Multiplication

### Check Your Understanding

Solve the following problems.

**1.** 45 × 78 **2.** 89 × 56 **3.** 67 × 92

**4.** 56 × 75 **5.** 59 × 48 **6.** 91 × 87

**7.** 64 × 95 **8.** 673 × 49





**Terence C. Reilly School No. 7**

436 First Avenue, Elizabeth, New Jersey 07206 • Ph: 908.436.6030 • Fax: 908.436.6012
Email: panagoth@epsnj.org • Website: epsnj.org/reilly

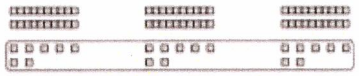
Name Date Time

# U.S. Traditional Multiplication (Standard)

Use blocks to model the problem. Multiply from right to left. Then find the total.

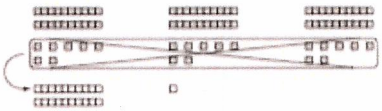
**Example**

**Multiply** the ones.
(3 × 7 = 21 ones)



$$\begin{array}{r} 27 \\ \times\ 3 \\ \hline \end{array}$$

**Rename** 21 ones as 2 tens and 1 one.

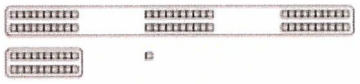


$$\begin{array}{r} {\scriptstyle 2} \\ 27 \\ \times\ 3 \\ \hline 1 \end{array}$$

**Multiply** the tens.
(3 × 2 tens = 6 tens)

$$\begin{array}{r} {\scriptstyle 2} \\ 27 \\ \times\ 3 \\ \hline 1 \end{array}$$

**Add** the remaining tens.
(6 tens + 2 tens = 8 tens)



$$\begin{array}{r} {\scriptstyle 2} \\ 27 \\ \times\ 3 \\ \hline 81 \end{array}$$

The product of **3** and **27** is **81.**

## Check Your Understanding

Solve the following problems.

**1.** 64 × 3 **2.** 56 * 8 **3.** 97 × 5

**4.** 505 * 3 **5.** 291 * 4 **6.** 137 × 49

**7.** 816 * 4 **8.** 495 * 3

Write your answers on a separate sheet of paper.





Terence C. Reilly School No. 7
436 First Avenue, Elizabeth, New Jersey 07206 • Ph: 908.436.6030 • Fax: 908.436.6012
Email: panagoth@epsnj.org • Website: epsnj.org/reilly

Name _____ Date _____ Time _____

## Partial-Quotients Division (1-digit divisor)

FOCUS ALGORITHM

To find the number of 6s in 354, first find all the partial quotients. Record them in a column to the right of the problem. Then add the partial quotients to find the final quotient or answer.

**Example**

(dividend) (divisor)
354 ÷ 6

**Ask:** How many [6s] are in 354? (at least 50)
The first partial quotient is 50.
50 * 6 = 300
Subtract 300 from 354.

**Ask:** How many [6s] are in 54? (9)
The second partial quotient is 9.
9 * 6 = 54
Subtract 54 from 54.
The difference is 0, so there is no remainder.

| | |
|---|---|
| 6)354 | |
| 300 | 50 |
| 54 | |
| 54 | 9 |
| 0 | 59 |

**Add** the partial quotients. The answer is 59. **354 ÷ 6 = 59**



### Check Your Understanding

Solve the following problems.

**1.** 135 ÷ 5
**2.** 736 ÷ 8
**3.** 292 ÷ 4
**4.** 6,730 ÷ 2
**5.** 392 ÷ 7
**6.** 204 ÷ 3
**7.** 9)171
**8.** 6)894

Write your answers on a separate sheet of paper.



Terence C. Reilly School No. 7
436 First Avenue, Elizabeth, New Jersey 07206 • Ph: 908.436.6030 • Fax: 908.436.6012
Email: panagoth@epsnj.org • Website: epsnj.org/reilly

Name _____ Date _____ Time _____

## Long Division (Standard)

Estimate to find the first digit of the quotient. Write that digit correctly above the dividend and multiply it by the divisor. Write the product below in the dividend. Find the difference and bring down the next number in the dividend. Repeat the procedure until you have used all the digits in the dividend.

**Example**

$3{,}843 \div 7$

- **Think: How many 7s are in 38?** (5)
  Write 5 in the quotient, above the 8.
  Multiply 5 × 7. (35)
  Subtract 35 from 38. (3)
  Bring down the 4 from the dividend. (to make 34)
- **Think: How many 7s are in 34?** (4)
  Write 4 next to 5 in the quotient.
  Multiply 4 × 7. (28)
  Subtract 28 from 34. (6)
  Bring down the 3 from the dividend. (to make 63)
- **Think: How many 7s are in 63?** (9)
  Write 9 next to 4 in the quotient.
  Multiply 9 × 7. (63)
  Subtract 63 from 63. (0)

```
  549
7)3,843
  35
   34
   28
    63
    63
     0
```

**3,843 ÷ 7 = 549**



### Check Your Understanding

Solve the following problems.

**1.** 172 ÷ 4 **2.** $5\overline{)430}$ **3.** $2\overline{)198}$

**4.** 182 ÷ 7 **5.** $9\overline{)765}$ **6.** 894 ÷ 3

**7.** 4,568 / 8 **8.** 3,042 ÷ 5

Write your answers on a separate sheet of paper.





436 First Avenue, Elizabeth, New Jersey 07206 • Ph: 908.436.6030 • Fax: 908.436.6012
Email: panagoth@epsnj.org • Website: epsnj.org/reilly