

## Math and After Math

Essay by Lensey Namioka

# What are you really **GOOD** at?

### COMMON CORE

**RI 1** Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text. **RI 2** Determine a central idea of a text and analyze how it emerges and is shaped and refined by specific details. **RI 3** Analyze how the author unfolds a series of ideas or events. **RI 4** Determine the meaning of words as they are used in a text. **L 5** Demonstrate understanding of word relationships.

Knowing what you're good at can take you a long way toward finding work and activities that you enjoy. In "Math and After Math," Lensey Namioka describes how she first embarked on one career path and then later discovered her true talent.

**DISCUSS** Make a list of activities you particularly enjoy. For each one, list the skills that help you succeed at the activity. With a partner, brainstorm career possibilities that could make use of those skills.



## ● TEXT ANALYSIS: IMPLIED MAIN IDEA

In nonfiction, the writer’s **central idea**, or overall message, is often referred to as the main idea. This **main idea** may be stated directly, or it may be implied by the factual details and personal examples and ideas that the writer chooses to include.

In “Math and After Math,” Lensey Namioka shares a series of anecdotes—episodes from her life through which she develops a main idea. To identify the implied main idea as you read, ask yourself, What important idea is conveyed by the anecdotes? How does this idea relate to the author’s conclusion?

## ● READING SKILL: ANALYZE SEQUENCE OF EVENTS

The events in a memoir are not always described in the same sequence in which they occurred. When describing or explaining events, a writer may move back and forth in time to make a point. This skipping around in time can be confusing, however, so it’s important for the reader to keep track of how the **sequence of events** actually unfolded. Signal words, such as *when*, *by the time*, or *for years*, help to clarify this sequence.

As you read “Math and After Math,” use a chart to jot down the important events in each stage of Namioka’s life. Then number them in the order they occurred in time.

Stage in Life	Order	Event
Second grade		Namioka suffers “abacus anxiety.”
Years later		Family emigrates to America. Math is best subject.

## ▲ VOCABULARY IN CONTEXT

Lensey Namioka uses the following boldfaced words to tell her tale of personal discovery. Use context clues to determine the meaning of each one.

1. The speaker’s **dialect** revealed that he was not a native of the area.
2. The movie’s **scenario** included no plot twists or surprises.
3. Her ability to act is **intuitive**; she has never had a lesson.
4. The detective’s **analytic** approach to solving problems led him to the killer.
5. Your **hypothesis** will not stand up to further testing.



Complete the activities in your **Reader/Writer Notebook**.

## Lensey Namioka

born 1929

### Always an Outsider

Lensey Namioka was born in China and moved to the United States when she was nine years old. She has lived in many places and, consequently, has felt herself to be something of an outsider wherever she has lived. It’s not surprising, then, that the protagonists in her stories for young adults are usually outsiders too.

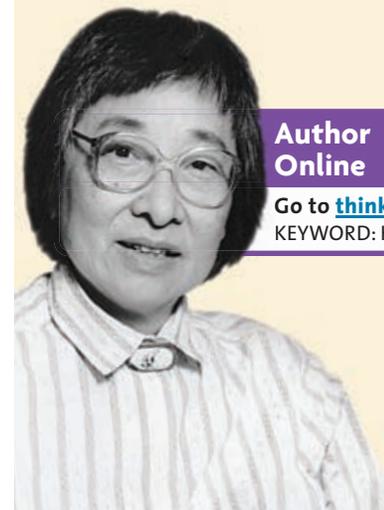
### Multicultural Author

Namioka’s writing draws on both her Chinese heritage and her husband’s Japanese heritage. She has written humorous novels about young Chinese immigrants in America, as well as a series of adventure-mystery books about two 16th-century Japanese samurai.

### BACKGROUND TO THE ESSAY

#### Girls and Math

In “Math and After Math,” Namioka describes how she stood out in her American classrooms as a girl who was good at math. Researchers have long sought to determine whether the differences in math performance between girls and boys stem from biology or culture. In elementary school, girls tend to outperform boys in many subjects, including math. In high school, however, the situation changes. Statistics show that, as a group, boys score slightly higher than girls on math aptitude tests. Also, boys tend to choose math-related college majors and careers more often than girls do, although this is changing. Researchers continue to debate various hypotheses that explain these gender differences.



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# Math and After Math

LENSEY NAMIOKA

“Seven!” shouted the teacher.

Or did he shout “Four”?

I shrank down in my seat. Math class was an absolute nightmare. The teacher scared me so much that my hands got sweaty, and my fingers slipped on the abacus<sup>1</sup> beads.

I was in the second grade when I discovered that I suffered from abacus anxiety. The trouble was that I was going to a school where the teacher spoke a different **dialect**. I grew up with Mandarin, the dialect spoken by the majority of the Chinese. When the eastern part of China was occupied by the Japanese, our family moved inland, to a region where I could barely understand the local dialect.

Writing was pretty much the same in any dialect, so in language and history classes I didn’t have trouble with what was on the blackboard. My problems started in the math class, where we had to learn the abacus. Before the days of the calculator, the abacus was the main tool for adding and multiplying. It still is, in many parts of China (as well as in countries like Japan and Russia).

The abacus teacher would shout out the numbers he wanted us to add or multiply. My ears didn’t always understand what he said, so *seven*, for instance, sounded a lot like *four*.

## Analyze Visuals ▶

What elements of the photograph reflect the writer’s attitude toward math?

**dialect** (dī’ə-lěkt’) *n.*  
a variety of a standard language unique to a certain region or social group

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1. **abacus** (äb’ə-kəs): a manual computing device consisting of rods hung within a frame and strung with movable counters.

$$1 \times 64 =$$

$$\times 45 =$$

$$25 \times 16$$



20 Until that class, math was one of my better subjects, especially when it came to multiplication. Years later, when we emigrated to America, I was astounded to hear one of my American friends recite the multiplication table:

“Two times one is two. Two times two is four. Two times three is six . . .”

It seemed to take forever. **A**

The multiplication table is much shorter in Chinese. One reason is that the Chinese names for numbers are all one-syllable. We don’t have numbers like *seven*.

Also, we omit words like *times* and *equals* while reciting. Instead of “Seven times two equals fourteen,” we say, *Er qi shi si*, or literally, *two seven fourteen*. So we do it in four syllables instead of eight.

30 The best trick is that we memorize only half as many entries, because we know that seven times two is the same as two times seven. (I learned later this was called the Commutative Law.)

This meant I could rattle off the multiplication table about three times faster than my American classmates. But I learned the table even faster than my *Chinese* classmates. The reason was that I sang it.

“You can remember a tune better than a string of numbers,” my father told me. “So I want you to sing the multiplication table.”

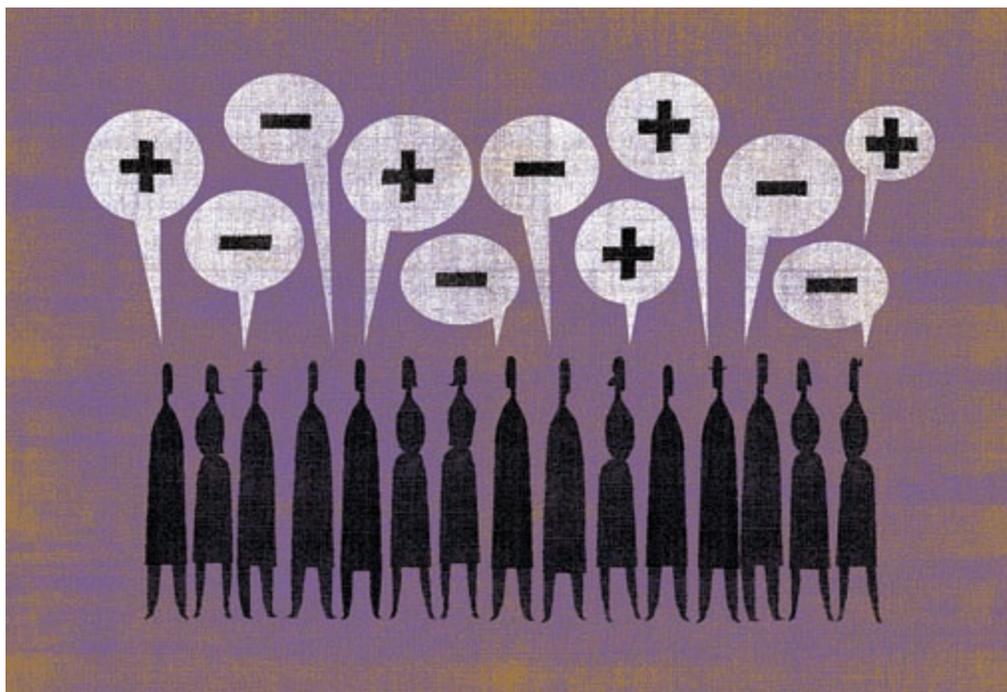
The standard way to teach musical notation in Chinese schools was to give numbers to the diatonic scale:<sup>2</sup> *do* was one (not a female deer), *re* was two (not  
40 a ray of sunshine), *mi* was three, and so on. When I had to remember that two times seven was fourteen, my father told me to hum the little tune *re ti do fa*. This was not a pretty tune, but it certainly stuck in my mind.

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2. **diatonic** (dī'ə-tōn'īk) **scale**: the standard musical scale of seven tones, often referred to as *do, re, mi, fa, sol, la, and ti*.

### **A** SEQUENCE OF EVENTS

Reread lines 20–24. Which words indicate the passage of time?



Following Father’s suggestion, I learned the multiplication table very quickly, and even now I still hum. The other day, when I was in the store buying candy bars, I noticed another customer staring at me. I was trying to figure out if my fistful of change was enough for four candy bars, and I must have been humming as I multiplied.

When I entered American schools, my best subject was math. I didn’t need to know much English to manage the Arabic numbers,<sup>3</sup> and my Chinese school had been a year ahead of American schools in math (because of shorter multiplication tables, maybe). **B**

After a while I realized that my classmates found me weird. During our early years in America, my family lived in towns where there weren’t too many Asians, and I looked different from everybody else in class. It turned out that my weirdness wasn’t just because I looked different, or because I hummed funny tunes.

“How come you’re so good at math?” asked one of my classmates.

“Why shouldn’t I be?” I asked.

“You’re a girl!”

60 In America, apparently, it was unusual for a girl to be good at math. It was different in China, where women were good at figures. They regularly kept the household accounts and managed the family budget.

A few years ago, I saw a movie about Chinese-Americans called *Dim Sum*.<sup>4</sup> A Chinese man who ran a restaurant in Chinatown brought his receipts to a woman friend, who figured out his accounts for him.

My American friends found the situation strange. “It’s not unusual at all,” I told them. “In my family, for instance, my mother made the major financial decisions.”

70 In fact, my mother made a financial killing when we were living in Berkeley, California. A neighbor took her to a land auction. A piece of land near our house was offered for sale, and Mother thought it would be fun to bid on it. Someone was bound to top her bid, she thought.

She was stunned when nobody else made a bid, and Mother found herself the owner of a large plot of land.

As she and her friend prepared to leave the auction room, a man rushed up to them. He was a realtor who had planned to bid for the land, but had arrived at the auction too late.

“I’ll give you whatever you paid, plus something extra!” he told Mother.

“No, thank you,” said Mother. “I’m quite happy with the purchase.”

80 The realtor raised his offer, but Mother still turned him down. He became frantic. “Look, I’ll go as high as two thousand dollars above your bid!”

This just made Mother more stubborn. “No, I want to keep the land.”

The realtor obtained our address and phone number, and immediately called our house.

**B IMPLIED MAIN IDEA**

Consider Namioka’s childhood success with math. What is she implying about Chinese math education?

**COMMON CORE RI.4**

**Language Coach**

**Word Definitions** You often have to read several definitions in a dictionary to find one that fits. Reread line 69. Which definition fits the use of *killing* in this line? (1) the act of one who kills, (2) a sudden gain, (3) very funny

3. **Arabic numbers:** the numerical symbols 1, 2, 3, 4, 5, 6, 7, 8, 9, and 0.

4. **Dim Sum:** the movie title refers to a Chinese cuisine in which small portions of a variety of foods, including an assortment of dumplings, are served.

When Father answered the phone, the realtor shouted, “Do you know what your wife just did? She threw away a chance to make two thousand dollars!”

“I’m sure she had her reasons,” Father answered calmly. Nothing that the realtor said could disturb him.

The land turned out to be an excellent investment, and helped to provide a tidy nest egg for my parents in their old age. **C**

In many other Asian countries, too, the housewife is the one who manages money. It’s normal for the husband to hand over his paycheck to his wife, and out of it she gives him an allowance. Perhaps it’s the result of Confucius’s teaching<sup>5</sup> that a gentleman is above money, so it’s the woman’s duty to be concerned with such petty matters.

Things were very different in America. An American husband would hit the roof if his wife did what my mother had done. Women here were supposed to be hopeless when it came to money matters and figures.

Many girls got good math grades in elementary school, but their grades began to slip when they entered middle school. By then they were getting interested in boys, and they didn’t want the boys to think they were weird.

I was weird in elementary and middle school because I was a real whiz at multiplication. In high school, I continued to be a whiz in my geometry and algebra classes. I was lucky to have a geometry teacher who addressed us by last name and didn’t care whether you were a boy or a girl, as long as you agreed with Euclid.<sup>6</sup>

My high school geometry class was also the first place where the word *argument* meant something good. My parents complained that I was always arguing. In geometry class, making an argument meant presenting something in an orderly, logical manner.

I also liked the story or word problems in my algebra class. Years later, when I was teaching math, I couldn’t understand why many students complained bitterly about them. To me, story problems meant fiction, romance. The most exciting one involved an army column marching forward at a certain speed. A messenger at the head of the column was sent back to the rear. If the column was so many miles long, would he be able to deliver his message in time? I pictured the following **scenario**:

“We expect to engage the enemy in half an hour,” the commander told the messenger. “You have to get word to the men in the rear of the column!”

The mud-splashed rider desperately lashed his horse, while arrows fell on him from ambushers. How fast did he have to ride so that he would reach the rear guard in time to deliver his message?

Attacking these story problems with relish, I was usually one of the first in the class to finish, and I was often sent to the board to write out the solution.

### **C** IMPLIED MAIN IDEA

Reread Namioka’s anecdote about her mother’s real estate purchase. What is the main idea of this anecdote?

### **D** SEQUENCE OF EVENTS

In this paragraph Namioka flashes forward to her adulthood. What is she able to reveal by doing this?

**scenario** (sĭ-nâr’ē-ō’) *n.* a description of a possible course of action or events

5. **Confucius’s** (kən-fyŏŏ’shəs-ĭz) **teaching**: the Chinese philosopher Confucius (551–479 B.C.) taught ideas about practical moral values that are still widely followed in China today.

6. **Euclid** (yŏŏ’klĭd): a third-century-B.C. Greek mathematician upon whose ideas much of the study of geometry in schools is based.



A math lecture in a university lecture hall

By the time I started college, I began to realize that it was unusual, unnatural—maybe even unhealthy—for girls to be good at math. I entered Radcliffe College, which was connected with Harvard. Some of my laboratory courses were taken together with the Harvard students, but classes such as English and math were taught separately on the small Radcliffe campus.

130 The English classes usually had around twenty students, but my beginning calculus class had only five of us. According to rumor, new instructors at Harvard were assigned to teach Radcliffe math classes as a test.

“If they manage to get through the year without breaking down, they’re allowed to go on to higher things,” we heard.

On the first day of our math class, the instructor (who later became a famous mathematician) crept into the room without looking at us, and spent the whole period mumbling into the blackboard. In fact, he spent the whole year mumbling into the blackboard.

“He’s awfully shy, isn’t he?” I remarked to a friend.

140 “Maybe he’s just scared of girls who study math,” she said.

Things got better when I entered the University of California, which was co-ed. The math classes were larger, and five girls in a class of forty boys weren’t enough to scare the instructors.

By this time I knew that in America a girl who was good at math was not only unusual, unnatural, unhealthy, but—worst of all—unattractive.

“Boys don’t date you if you’re a math whiz,” I was told. **E**

The situation was different for me. First of all, racial cross-dating was still rare when I was in college, so I dated only Chinese-American boys, who were hardened to the sight of their mothers or sisters doing math.

150 I got very good grades in math throughout my school years and majored in mathematics in college. I had a head start in the multiplication table, and I loved arguing and proving things. By the time I learned that I wasn’t supposed to do well in math, it was too late.

A hot topic when I was in graduate school was the right-brain, left-brain debate. Scientists decided that men tended to use their left brain, which was the reasoning part, while women used their right brain, the **intuitive** part.

“That’s why we’re good at hard sciences and math,” the boys in my classes assured us. “You girls should stick with poetry, history, art, and things like that. It’s a matter of genes or hormones.”

160 Then, later studies showed that the Japanese listened to insect sounds with their left (**analytic**) brain, while Westerners listened to insects with their right brain. Still other studies showed that professional musicians (both male and female) listened to music with the analytic side of their brain, while the general public listened with their intuitive side.

It began to seem that training and social pressure, not genes and hormones, influenced which side of the brain was used. I eagerly followed the debate and could hardly wait for the day when it was okay for women to study science and math in America. **F**

170 Today, attitudes are finally beginning to change. My daughters tell me that girls in high school math classes are less afraid to do well, and many women go into science and math in college. (One of my daughters is a computer scientist, and the other is an engineer.)

For years, I seemed to be doing well in math because of my Chinese background, because I wasn’t afraid to get good math grades in school. I did all the assigned problems without much trouble. But it wasn’t enough to do all the problems assigned by the teacher. To be a creative mathematician, you also have to make up problems. I finally learned that I would never do really original work in mathematics.

180 I found that, for math at least, I lacked what the Chinese call *huo qi*,<sup>7</sup> literally “fiery breath,” in other words, ambition and drive. In English the

**E IMPLIED MAIN IDEA**

What do Namioka’s anecdotes about college suggest is the main reason that American girls do poorly in math?

**intuitive** (ĩn-tōō’ĩ-tĩv) *adj.*  
based on what seems to be true without conscious reasoning; instinctive

**analytic** (ǎn’ə-lĩt’ĩk) *adj.*  
using logical reasoning or analysis

**F IMPLIED MAIN IDEA**

Reread lines 160–168. How does this factual information about brain research support Namioka’s main idea?

7. *huo qi* (hwō chē).

expression “fire in the belly” comes close. I didn’t think I was creative enough in mathematics to do good research, nor did I have the drive. **G**

My immediate excuse for getting out of math was the difficulty of arranging for childcare. To be completely honest, I have to admit that I left mathematics because I wasn’t all that good, despite my early impressive grades.

I made the transition from mathematics to freelance writing through translation work. For a brief period, I translated mathematical papers from Chinese into English.

My work dried up, however, when the Cultural Revolution<sup>8</sup> swept over  
190 China. Mathematicians, like other scholars, were ordered to stop research and write papers confessing their political shortcomings. (These were the lucky ones. The unlucky ones spent their time cleaning latrines.) With no mathematical papers to translate, I eventually took up freelance writing.

My parents reproached me. “How can you give up a beautiful subject like mathematics?”

“We can admire beautiful pictures or music,” I told them. “But we don’t all have the gift to paint or compose.”

“You spent so many years studying math,” some people say. “Does it help you at all in your writing?”

200 Math has taught me the useful lesson of thrift. I’ve met hundreds of mathematicians, and not one of them was a spendthrift. In math you’re taught to squeeze the strongest possible result out of the weakest possible **hypothesis**—in other words, you try to get the most value for your money.

This thrifty habit stayed with me after I became a writer. When I put people or events into a book, I squeeze the most out of them. Very few things are thrown in and then forgotten later. As a result my plots seem to be carefully worked out in advance, instead of being made up as I go along. **A**

Years ago, I enjoyed story problems because the stories fired my imagination. In fact, writing fiction was where I finally found my “fiery breath.” Instead  
210 of story problems, I can write problem stories. And that’s what I’m still doing today. 

### **G** IMPLIED MAIN IDEA

What does Namioka suggest is needed in order for a person to express a true talent?

**hypothesis** (hī-pōth’ī-sīs)  
*n.* an assumption made in order to test its possible consequences

### **COMMON CORE** L 5

#### **A** ANALOGIES

An **analogy** is a comparison of two things that are alike in certain ways. In lines 200–207, Namioka uses analogies to describe the effect of studying math on her writing. She first explains that math teaches behaviors similar to thrifty spending habits. Then she explains how her writing style is also “thrifty”—nothing is wasted or cast aside. Create your own analogy by comparing either math or writing to something else.

8. **Cultural Revolution:** a political upheaval in China in the 1960s that resulted in many attacks on intellectuals.

## Comprehension

1. **Recall** Why did Namioka do so well in math as a young child?
2. **Recall** In the United States, how did Namioka's classmates regard her talent for math? Why?
3. **Summarize** According to Namioka, what is the typical Chinese attitude about girls' and women's abilities in the area of math?
4. **Clarify** Why did Namioka finally give up her work in mathematics?

## Text Analysis

5. **Compare and Contrast Cultures** What is the main cultural difference discussed in this selection? Support your answer with details from the text.
6. **Analyze Conflict** In this essay, Namioka traces her struggle to determine her true talent. What part of this conflict is **internal**? What part is **external**? Give reasons for your responses.
7. **Identify Implied Main Idea** In your own words, state the main idea, the central idea or message, of this essay. Cite evidence from the text to support your answer.
8. **Evaluate Sequence** On your sequence chart, review the parts of the essay where Namioka describes events out of chronological order. In each case, evaluate the effect of this change of sequence. Do you think this is a good technique? Cite evidence to explain your opinion.
9. **Make Judgments** How do contemporary views on women's talent in math compare with those discussed in this essay? Cite evidence to support your claim.

### COMMON CORE

**RI 1** Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text. **RI 2** Determine a central idea of a text and analyze how it emerges and is shaped and refined by specific details. **RI 3** Analyze how the author unfolds a series of ideas or events.

## What are you really **GOOD** at?

Will you follow a career that utilizes your talents?

# Vocabulary in Context

## ▲ VOCABULARY PRACTICE

Decide whether these statements are true or false.

1. If you have an **intuitive** understanding of a procedure, you will probably check each step as you go.
2. Spanish is a **dialect** of English.
3. A student asking for more homework is an unlikely **scenario**.
4. A **hypothesis** is often the first step in an investigation.
5. A person with an **analytic** mind could probably be a successful mathematician.

### WORD LIST

analytic  
dialect  
hypothesis  
intuitive  
scenario

## ACADEMIC VOCABULARY IN WRITING

• context • interpret • reveal • significant • tradition

Namioka talks about the Chinese **tradition** related to the handling of household finances. With a partner, discuss other traditions she identifies and what they **reveal** about the culture of China or the culture of the United States. Use at least one Academic Vocabulary word in your discussion.

## VOCABULARY STRATEGY: USING CONTEXT CLUES

*Dialect* refers to a variety of speech that differs from the standard speech patterns of a given culture. Vocabulary is one element of dialect. For example, a person might refer to a sweet, carbonated beverage as a soda, a pop, or a soft drink, depending on where he or she lives in the United States. You can often infer the meaning of a word in dialect by noting **context clues** in the sentences and paragraphs that surround the word.

**PRACTICE** Identify the meaning of the underlined term in each sentence. Use context clues and your own knowledge to determine its meaning. Work with other students to try to identify where or by whom the term is mostly used.

1. Put a schmear of cream cheese on that bagel.
2. The gum bands holding the papers together were old and frayed.
3. You can pack your lunch in that little poke.
4. My grandparents lived on the top floor of the two-flat where I grew up.
5. That plug ought to be put out to pasture.
6. After drinking the chocolate frappé, he wasn't hungry for dinner.
7. Leon is getting together with his homeboys.
8. You can get some water from the bubbler in the hallway.

### COMMON CORE

L 4a Use context as a clue to the meaning of a word or phrase.

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