

Writing for Mathematics

From: *Write for Mathematics*, Rothstein, Rothstein & Lauber, 2007

Personal Essay:

Write three reasons why you need to understand fractions.

Suggested openings and paragraph starters:

I need to understand fractions because

First...

Second...

Finally...

In order to _____, I need to have a lot of information about _____.

Explanatory Essay

Prompt: You have invited six friends to your birthday party. Your mother has baked 32 cookies. Explain three ways that you and your six friends can solve the problem of sharing the cookies.

Prompt: You have learned that the formula for finding the area of a right triangle is $A = (1/2) \times L \times H$. You now have to find the area of an oblique triangle. How do you use your knowledge about finding the area of a right triangle to find the area of an oblique triangle?

Prompt template: You have learned that _____. You now have to _____. How do you use this new knowledge about _____ to _____?

Persuasive Essay

Prompt: Write a persuasive essay to a group of students convincing them to use three shortcut rules in algebra.

Prompt: Your mathematics class is having a debate about whether to use liquid measures in the metric system or in the United States system. Half the class votes for the metric system and the other half votes for the United States system. You have been elected to write a persuasive essay arguing for the metric system. Present your case.

Personifications and Interactions

This strategy helps students expand knowledge and gain greater insight into mathematical concepts and ideas through the use of imagination and role-play in writing. This is how it works:

- Students assume the point of view of a mathematical term or concept, for example “I am a numeral, I can take many forms...”

- Student explains the attributes or characteristics of mathematical terms or concepts. Example, “I am the diameter. Look for me in a circle or globe. Without me, the radius is meaningless.”
- Student writes about the history of the term or concept. For example, “I am zero, the symbol that shows place value. But for a long time, no one understood me, except some astute mathematicians in India.”
- Student describes the cultural background. For example, “I am the Hebrew symbol called chai. When I am thought of simply as letters, I mean life...”

Prompts for Personifications and Interactions:

- An Arabic numeral writing to a roman numeral
- A Roman numeral defending itself
- Fibonacci explains his patterns
- Plane and Dimension write letters to each other
- Create Your Own Number Patterns
- Correspondence between a hand and a foot
- Globe monologue: circumference, radius, diameter. “Be sure to explain what these terms mean and describe what you look like. Imagine that your audience is a cube.”
- A Martian discovers the Hundred Chart and writes a letter to tell about it.
- E-mail to a Martian about the Hundred Chart