

## Mathematics in Ancient Egypt



### 1 Getting Started

The ancient Egyptian civilization in North Africa began around 3150 B.C. with the union of Upper and Lower Egypt under the first pharaoh. The rule of the pharaohs ended in 31 B.C. when the Romans conquered Egypt and made it a province.

The ancient Egyptians' achievements included a system of mathematics, glass technology, medicine, literature, irrigation and agricultural techniques, and art. Their mastery of surveying, quarrying, and construction techniques allowed them to build pyramids, temples, and obelisks.

**Essential Question** How is mathematical knowledge that was originally discovered by the ancient Egyptians used today?

**Sample:** To multiply two whole numbers, the ancient Egyptians repeatedly multiplied by 2. The “doubling lists” used to multiply 53 by 85 are shown. The lists stop when the last number in the first list is greater than the first number in the second list.

|      |      |
|------|------|
| • 1  | 53   |
| • 2  | 106  |
| • 4  | 212  |
| • 8  | 424  |
| • 16 | 848  |
| • 32 | 1696 |
| • 64 | 3392 |

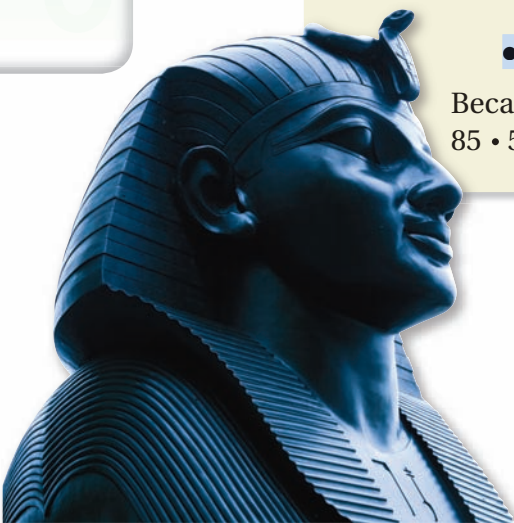
Because  $85 = 1 + 4 + 16 + 64$ ,  
 $85 \cdot 53 = 53 + 212 + 848 + 3392 = 4505$ .



Ancient Papyrus



Ancient Egyptian Numbers



The Blue Sphinx

## 2 Things to Include

- Explain how the ancient Egyptians multiplied two whole numbers. Give an example.
- Explain how the ancient Egyptians divided two whole numbers. Give an example.
- How did the ancient Egyptians write whole numbers? Give some examples.
- How did the ancient Egyptians write fractions? Give some examples.
- How did the ancient Egyptians use ratios to measure the height of a pyramid? Give an example.
- Write your name using ancient Egyptian hieroglyphics.
- Describe how ancient Egyptians used mathematics. How does this compare with the ways in which mathematics is used today?



Ancient Egyptian Alphabet



## 3 Things to Remember

- Add your own illustrations to your project.
- Try to include as many different math concepts as possible. Your goal is to include at least one concept from each of the chapters you studied this year.
- Organize your report in a folder, and think of a title for your report.



What does this spell?