

1. Read Burton §2.1-2.2. Summarize the mathematical topic discussed in these sections using at most two sentences.

These sections describes the origins of the Rhind Papyrus including the events that led to its completion and translation. Then it describes ancient Egyptian arithmetic including the use of unit fractions, multiplication via doubling, and division.

2. Describe the **Rhind papyrus**

- (a) written roughly when: 1650 BC
- (b) author: scribe Ahmes
- (c) language/script: Egyptian heiratic
- (d) dimensions: 18 feet long, 13 inches tall
- (e) when and where was it purchased: 1858 in Luxor Egypt by Scotsman Henry Rhind. Now in British Museum.
- (f) what sort of math is in it? practical problems (85 of them) providing instruction on multiplication, division, fractions and geometry. Ahmes characterizes the work as re-producing earlier, known materials.
As a piece of mathematical instruction, I think it can be compared to a “Calculus for Dummies” book that included numerous examples as examples of a general method.

3. Use the ancient Egyptian method of doubling to calculate the product 13×62 . (See pages 51-52 for examples.)

✓	1	62	
	2	124	
✓	4	248	Answer: 806
✓	8	496	
13 62+248+496=806			

4. If you were going to calculate the product 127×1304 using the Egyptian method, how many times would you need to double 1304?

6 times because $2^7 = 128 > 127$.

5. Write the fraction $\frac{7}{12}$ as the sum of **distinct unit fractions** in two different ways.

$$\frac{1}{2} + \frac{1}{12} \text{ and } \frac{1}{3} + \frac{1}{4}$$