MTH 6610 - History of Math   Reading Assignment #2
Term V - 2024

Pat Rossi   Name _____

Instructions.   Read pages 33-71 to find the answers to these questions in your reading.

1. According to Aristotle, where did mathematics begin, and why?

2. From what manuscripts do we derive most of our knowledge of ancient Egyptian mathematics?

3. What is the significance of the Rosetta Stone to the history of mathematics?

4. Briefly describe how the Egyptians performed multiplication and division.

5. What was peculiar about the Egyptians' use and notation of fractions?

6. To what extent were the Egyptians capable of solving problems that can be modeled by linear equations, and what do we call the methods that they used?

7. How did the Egyptians compute the area of a four-sided piece of land? What is noteworthy about this procedure?

8. What formula did the Egyptians use to compute the area of a circle?

9. What noteworthy theorem from mathematics is attributable to the "Old Babylonians" (1800-1600 B.C.)?

10. What explanation is given as to why the Babylonians attained a much more sophisticated and theoretical understanding of mathematics?

11. What "algebraic" concept of division did the Babylonians have?

12. What note-worthy "algebraic" tool had the Babylonians developed by 2000 B.C.?

Homework: (next page)

On page 51, do the following exercises: 1-3, 11, 12, 19, 20 (On Ex 19 Use the Method of **DOUBLE** False Position)

Solve the equations below using double false position. (you need not express the results using unit fractions)

$$3x + 16 = 0$$

$$16x + 3 = 0$$

Remark: Note that without the concept of "equation," the solution of problems that can be modeled by equations of the form:

$$x + \frac{b}{a}x = c,$$

and

$$ax + b = 0.$$

have no obvious method of solution. Hence, the Egyptians had the "mysterious algorithms" used in the Method of False Position and the Method of Double False Position.

On page 61, do the following exercises: 1a, 2, 3, 4