

MTH 6610 Reading Assignment #7

SUMMER 2018

Pat Rossi

Name _____

Instructions.

Read pages 213-237 and answer the following questions.

1. What act caused an end to mathematical study in Alexandria? When?
2. What noteworthy contributions did the Romans make to mathematics? (Somewhat of a trick question)
3. What development effectively put an end to the study of science and mathematics in the Western Roman Empire?
4. How is it that the accumulated knowledge of Greek/Alexandrian mathematicians was preserved over the centuries for rediscovery by Renaissance mathematicians?
5. How could we describe Diophantus' main contribution to mathematics, and what is the name of the "text" that contains his work in this area?
6. What is Diophantus' supposed background?
7. For what riddle is Diophantus well known?
8. What is noteworthy about the solutions to Diophantus' equations?
9. What mathematicians are credited with the earliest attempts to systematically solve the indeterminate equation
$$ax + by = c$$
by a general method?
10. What influence did early Indian mathematicians "receive"?
11. What contributions to mathematics are credited to Aryabhata?
12. What contributions to mathematics are credited to Brahmagupta?
13. What exactly IS a "Diophantine Equation"?
14. By whom were simultaneous Diophantine Equations first studied, and when?
15. For what theorem is Pappus known?

16. What is considered to be the main value of Pappus' writings?
17. What "traumas" were inflicted upon the Alexandrian Library, and by whom?

Homework: Do Exercises on p. 231 #1, 13, 14, 15, 16, 17, 19