

Mathematics 143/Hmk.4

1. From Katz, p. 191; 7, 8.
2. From Book II, problem 22 of Arithmetica: Find two numbers such that the square of either added to the sum of both gives a square. [Hint: If the numbers are taken to be x and $x + 1$, then one condition is satisfied].
3. Which of the following diophantine equations can not be solved?
 - a. $6x + 51y = 22$
 - b. $33x + 14y = 115$
 - c. $14x + 35y = 93$
4. Determine all solutions in integers of the following diophantine equations:
 - a. $56x + 72y = 40$
 - b. $24x + 138y = 18$