

MthU201  
Quiz #3  
40 Minutes

History of Mathematics  
Professor Gilmore  
Apr. 5, 2006

Name: \_\_\_\_\_.

Show All Your Work

1. Write a paragraph on each of the following topics. Each paragraph must contain at least four distinct facts about the topic indicated: **Continue your paragraphs on the back of this sheet if necessary.**

a. The ancient Yangshao-Longshan culture.

b. The Jiuzhang Suanshu.

c. The mathematician Qin Jiushao.

( OVER )

2. a. Find one solution in integers to the Diophantine equation  $y^2 = 24x^2 + 1$ .  
Explain how you got your solution.

b. Use the cross-multiplication algorithm of Brahmagupta to find three more solutions to this same equation.