**History of Mathematical Ideas**
**Quiz 7**

**Name:**_____

You have 10 minutes to complete this quiz. If you have a question raise your hand and remain seated. In order to receive full credit your answer must be **complete**, **legible** and **correct**. Show your work, and give adequate explanations.

1. State Brahmagupta's Identity.

2. Use the method of exhaustion to show that $\frac{1}{9} + \frac{1}{9^2} + \frac{1}{9^3} + \cdots = \frac{1}{8}$. (Hint: Show $8 \cdot \frac{1}{9} + 8 \cdot \frac{1}{9^2} + 8 \cdot \frac{1}{9^3} + \cdots = 1$.)