History of Mathematical Ideas
Quiz 4

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. Define the following terms.

   (a) algebraic number

   A number is algebraic if it is a root of a nonzero rational polynomial.

   (b) transcendental number

   A number is transcendental if it is not algebraic.

2. What is Lindemann's famous result from 1882?

   Lindemann proved that if $\alpha \neq 0$ is algebraic, then e^{α} is transcendental.