History of Mathematical Ideas
Quiz 8

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 *root of unity*. Give three examples.

A root of unity is a root of $x^n - 1 = 0$ for some n.
Three examples are $1, -1, i$.

2. Write down the elementary symmetric polynomials in three variables.

$$\begin{aligned} s_1 &= x + y + z \\ s_2 &= xy + xz + yz \\ s_3 &= xyz \end{aligned}$$