**Secret Numbers**

Agent 00111:                                       Agent M:

Greetings, secret agent 00111!  Your mission, should you choose to accept it, is to help Agent M plan a pizza party.  Unfortunately, M has no idea how much pizza to order for his 83 guests.  Lucky for him, party planning is your specialty!  Estimate the number of pizzas he'll need on scratch paper, and then convert that number to binary and write it here:  (When you're finished, hand your paper to Agent M who will then decode it, write down the answer on this page, and hand it back to you.)

Your next mission is to figure out how to communicate with the Triyums (aliens with only 3 fingers).  The following questions should help you devise a number system they will understand.

How many numerals do you think they will use?  (Hint:  one for each finger!)

What do you think these numerals are?

How high can Triyums count?

How do Triyums write the number three?

How do Triyums write the number six?

How do Triyums write the number sixteen?