Name:

Problem 1: It is a fact that 2 is a primitive root of 5. Here is a table of discrete logarithms in base 2 modulo 5:

a	1	2	3	4
$\log_2 a$	0	1	3	2

Use this table to give all solutions to the equation

$$3x^{13} \equiv 4 \pmod 5.$$