First of all, for the instructions, the OP CODE, it uses 8 bits (2^8=256>150), for the register, the OP1, another 8 bits willl be needed (for the same reason, 2^8=256), and for the memory, OP2, 30 bits will be needed (2^{30}=1,073,741,824>1,000,000,000). It's also necesary to use two bits for an addressing code that will determine which kind of sencond operand we have. The total width is 48 bits.

1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8	1	2	1	2	3	4	5	6	7	8	9	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	3
																											0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0