Rules of Formation for MIU System and TNT Equivalents

Rule	MIU	TNT Equivalent
1	$x\mathbf{I} \rightarrow x\mathbf{IU}$	$10m + 1 \rightarrow 10\cdot(10m + 1)$
2	$\mathbf{M}x \rightarrow \mathbf{M}xx$	$3\cdot10^m + n \rightarrow 10^m \cdot(3\cdot10^m + n) + n$
3	$x\mathbf{III}y \rightarrow x\mathbf{U}y$	$k\cdot10^{m+3} + 111\cdot10^m + n \rightarrow k\cdot10^{m+1} + n$
4	$x\mathbf{UU}y \rightarrow xy$	$k\cdot10^{m+2} + n \rightarrow k\cdot10^m + n$

1. Rule 1: x = **M**; *What's* m? What's the product of the rule?

2. Rule 1: m = 301; *What's* x? What's the product of the rule?

3. Rule 2: m = 3, n = 10; *What's* x? What's the product of the rule?

4. Rule 3: k = 3, m = 2, n = 1; *What's* x and y? Wha'ts the product of the rule?

5. Rule 3: Are there any restrictions on the values k can take?