3n nodes $(m+1)^2 + (m+1)^3 + (m+1)^6$.

$\boxed{0}\ \boxed{1}\ \boxed{0}\ \boxed{0}\ \boxed{1}\ \boxed{1}\,(m+1)^2\ \ \overset{m+1}{\boxed{0}}\ \ \overset{1}{\boxed{0}}$

$\boxed{0}\ \boxed{1}\ \boxed{0}\ \boxed{1}\ \boxed{0}\ \boxed{0}\ \ldots\ \boxed{0}\ \boxed{1}$

$\boxed{1}\ \boxed{0}\ \boxed{0}\ \boxed{0}\ \boxed{1}\ \boxed{1}\ \ldots\ \boxed{0}\ \boxed{0}$

each hyperedge (subset) of size 3 can be represented as a 3n-digit number with 3 1's (in the corresponding positions) and 0's elsewhere.

$\boxed{1}\ \boxed{1}\ \boxed{0}\ \boxed{1}\ \boxed{1}\ \boxed{1}\ \ldots\ \boxed{0}\ \boxed{1}$

$\boxed{0}\ \boxed{2}\ \boxed{0}\ \boxed{1}\ \boxed{1}\ \boxed{1}\ \boxed{0}\ \boxed{0}$

0 time $\boxed{1}\ \boxed{1}$

11 times $\boxed{1}$

Take these sequences to Represent integers in $(m+1)$-ary numbers.
then no carry ones can happen.

Idea: Represent each hyperedge/set using an n-bit string, each bit corresponding to an element. A bit "1" means the element is contained in the set, and "0" if not.
Since each set has 3 elements, each such string has 3 one's.

$$\boxed{1}\quad\boxed{}\quad\boxed{}\quad\boxed{1}\quad\boxed{}\quad\boxed{1} = 1+(m+1)^2+(m+1)^5$$

$$\boxed{}\quad\boxed{}\quad\boxed{1}\quad\boxed{1}\quad\boxed{1}\quad\boxed{} = (m+1)+(m+1)^2+(m+1)^3$$

$+)$

$$\boxed{1}\quad\boxed{0}\quad\boxed{1}\quad\boxed{2}\quad\boxed{1}\quad\boxed{1}$$

Summing up the strings, the corresponding bit in the sum counts the # of times the element is covered by the sets. To covers everything exactly once, we should have an all "1" string.
Caveat: We should avoid carries, so we need to work with a $(m+1)$-ary representation. So the all "1" sequence corresponds to $\sum_{i=0}^{n-1}(m+1)^i = \underbrace{\frac{(m+1)^n-1}{m}}_{=K}$, a number exponentially large.