False.

Proof:

Assume that $(\exists \mathrm{m} \in \mathbb{N})(\exists \mathrm{n} \in \mathbb{N})(3\mathrm{m} + 5\mathrm{n} = 12)$

We have $\mathrm{m} = \frac{12}{3} - \frac{5n}{3} = 4 - \frac{5n}{3}$

Since *n* is a natural number, *m* is a natural number, *n,m* are both non-negative, so $\mathrm{m} = 4 - \frac{5n}{3}$ can not hold,

i.e., we can not find a natural number n that satisfy $\mathrm{m} = 4 - \frac{5n}{3}$.

We have a contradiction. So the original statement is false.