1. Given floating point numbers $a, b,$ and c such that both $a+b$ and $fl(a+b)+c$ are in range then there exist real numbers $\overline{a}, \overline{b},$ and $\overline{c}$ so that $fl((a+b)+c) = (\overline{a}+\overline{b})+\overline{c}$, where for some $e_a, e_b,$ and e_c satisfying $|\varepsilon_a| \leq 2\varepsilon_0 + O(\varepsilon_0^2)$, $|\varepsilon_b| \leq 2\varepsilon_0 + O(\varepsilon_0^2)$, and $|\varepsilon_c| \leq \varepsilon_0$, we have $\overline{a} = a(1+\varepsilon_a), \overline{b} = b(1+\varepsilon_b),$ and $\overline{c} = c(1+\varepsilon_c)$.

2. Given floating point numbers $a, b, c,$ and d such that $a \cdot b, c/d$ and $fl(a \cdot b) + fl(c/d)$ are in range then there exist real numbers $\overline{a}, \overline{b}, \overline{c}$ and $\overline{d}$ so that $fl(a \cdot b + c/d) = \overline{a} \cdot \overline{b} + \overline{c}/\overline{d}$, where for some e_a, e_b, e_c, and e_d satisfying $|\varepsilon_a| \leq 2\varepsilon_0 + O(\varepsilon_0^2)$, $|\varepsilon_b| \leq 2\varepsilon_0 + O(\varepsilon_0^2)$, $|\varepsilon_c| \leq 2\varepsilon_0 + O(\varepsilon_0^2)$, and $|\varepsilon_d| \leq 2\varepsilon_0 + O(\varepsilon_0^2)$, we have $\overline{a} = a(1+\varepsilon_a), \overline{b} = b(1+\varepsilon_b), \overline{c} = c(1+\varepsilon_c),$ and $\overline{d} = d(1+\varepsilon_d)$.