1 Unstarred version

$$u_{0} + \frac{1}{u_{1} + \frac{1}{u_{2} + \frac{1}{u_{n}}}} \\ u_{2} + \frac{1}{u_{n}} \\ u_{0} + \frac{1}{u_{1}} + \frac{1}{u_{2}} + \frac{1}{\dots} + \frac{1}{u_{n}}$$

2 Starred version

$$a + \frac{b}{c + \frac{d}{e + \frac{f}{c}}}$$

$$a + \frac{b}{c} + \frac{d}{e} + \frac{f}{c} + \frac{y}{z}.$$

3 Operator

$$\int_{k=1}^{n} (b_k : c_k) = \frac{b_1}{c_1 + \frac{b_2}{c_2 + \frac{b_3}{c_n}}}$$