3 $a_1, a_2, \cdots\cdots, a_n, \cdots\cdots$

(1) $a_n = \dfrac{1}{n} \sin n$

(2) $a_n = \log(n+1) - \log n$

(3) $a_n = n \cos \dfrac{n\pi}{4}$

(4) $a_n = \sqrt{2n} - n$

(5) $a_n = \dfrac{2^n}{n^2}$

(6) $a_n = \dfrac{1}{n^2} + \dfrac{1}{(n+1)^2} + \cdots\cdots + \dfrac{1}{(2n)^2}$