2814.
$$\sum_{n=1}^{\infty} \frac{(n!)^2}{(2n)!} x^n.$$

2815,
$$\sum_{n=1}^{\infty} \alpha^{n^2} \cdot x^n$$
 (0<\alpha<1).

2816.
$$\sum_{n=0}^{\infty} \left(1 + \frac{1}{n}\right)^{n} x^{n}$$
.

2817.
$$\sum_{n=1}^{\infty} \frac{n!}{a^{n!}} x^n \ (a > 1).$$

2818.
$$\sum_{i=1}^{\infty} \left[\frac{1 \cdot 3 \cdot 5 \cdot \ldots (2n-1)}{2 \cdot 4 \cdot 6 \cdot \ldots (2n)} \right]^{p} \left(\frac{x-1}{2} \right)^{n}.$$

2819.
$$\sum_{n=1}^{\infty} (-1)^n \left[\frac{2^n (n!)^3}{(2n+1)!} \right]^p x^n.$$

2820.
$$\sum_{m \in [m-1) \cdot \dots \cdot (m-n+1) \atop n!} x^{n}.$$

2821.
$$\sum_{n=0}^{\infty} \left(\frac{a^n}{n} + \frac{b^n}{n^2} \right) x^n$$
 $(a > 0, b > 0).$

2822.
$$\sum_{n=0}^{\infty} \frac{x^n}{a^n + b^n} \quad (a > 0, b > 0).$$

2823.
$$\sum_{n=0}^{\infty} \frac{x^n}{a^{\sqrt{n}}} \quad (a > 0).$$

2824.
$$\sum_{n=1}^{\infty} \frac{3^{-\sqrt{n}} x^n}{\sqrt{n^2+1}}.$$

2825.
$$\sum_{n=1}^{\infty} \frac{(2n)!!}{(2n+1)!!} x^n.$$