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i2

$$T_4 = T_3 + 5$$

$$\binom{n}{3} = \binom{n}{2} + 5 \rightarrow \frac{n(n-1)(n-2)}{6} = \frac{n(n-1)}{2} + 5$$

$$n(n^2 - 3n + 2) = 3n(n-1) + 30$$

$$0 = n^3 - 6n^2 + 5n - 30 = n^2(n-6) + 5(n-6) = (n^2+5)(n-6) \rightarrow n=6$$

$$T_{k+1} = \binom{6}{k} x^{\frac{6-k}{2}} + (ax^{-1})^k$$

$$1 = \frac{18-3k}{4} - k \rightarrow |k| = 2$$

$$T_3 = \binom{6}{2} a^2 x = 15a^2 x$$