where s_n is the n^{th} triangular-square number.

Likewise, we can compute a formula for the n^{th} triangular-pentagonal number. The result is

$$s_n = \frac{(2 - \sqrt{3})(97 + 56\sqrt{3})^n + (2 + \sqrt{3})(97 - 56\sqrt{3})^n - 4}{48} .$$

This agrees with a result recently published by W. Sierpiński [4].

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[Continued from page 71.]

$$M^{-1} = \sum_{k=0}^{\infty} \frac{m_k^*}{k!} D^k$$

is given by

$$\text{(VII)} \qquad \sum_{k=0}^{\infty} \frac{m_k^*}{k!} t^k = 1/(Ae^{c_1 t} + Be^{c_2 t}) .$$

We now note that for Case 2, where $A + B = 0$, Eq. (VII) does not exist for $t = 0$, and hence there is no inverse operator M^{-1}. Thus, a sufficient condition for M^{-1} (see (I)) to exist is that $A + B \neq 0$, i.e., Case 1. For $A + B \neq 0$, one readily finds that

$$\text{(VIII)} \qquad (A + B)m_k^* = (c_2 - c_1)^k H_k\left(\frac{c_1}{c_1 - c_2} \middle| -A/B\right) ,$$

where $H_k(x|\lambda)$ is the Eulerian polynomial cited in (*).

Many more identities can be quoted. Indeed, for $m, n = 0, 1, \cdots,$ one has

[Continued on page 112.]