Errata for *Figurate Numbers* (2012)

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Introduction

This document presents a compilation of errata identified in the book *Figurate Numbers* (2012) by Michel Deza and Elena Deza. The corrections were identified by Edgar Delgado Vega during the development of the figuratenum library.

This list focuses on the first three chapters of the book, which cover plane, spatial, and multidimensional figurate numbers. Readers who identify additional inaccuracies or wish to suggest further corrections are encouraged to contribute.

Errata

1. **Chapter 1, Formula in the table on page 6:**
   The formula for square numbers is incorrectly written as:
   $$\frac{1}{2}(n^2 - 0 \cdot n)$$
   It should be:
   $$\frac{1}{2}(2n^2 - 0 \cdot n)$$

2. **Chapter 1, Formula in the table on page 51:**
   The formula for centered 26-gonal numbers is incorrectly given as:
   $$\frac{1}{3}n^2 - 13n + 1$$
   with the values $546, \cancel{728}, \cancel{936}, \cancel{1170}$.
   The correct formula is:
   $$13n^2 - 13n + 1$$
   with the values $547, 729, 937, 1171$.

3. **Chapter 1, Formula in the table on page 51:**
   The value for centered 27-gonal numbers is incorrectly listed as 972.
   The correct value is 973.

4. **Chapter 1, Formula in the table on page 51:**
   The value for centered 28-gonal numbers is incorrectly listed as 84.
   The correct value is 85.

5. **Chapter 1, Page 65 (Polite Numbers):**
   The term *inpolite numbers* is incorrectly used.
   It should read: *impolite numbers*.

6. **Chapter 1, Formula for Truncated Centered Pentagonal Numbers on page 72:**
   The formula for truncated centered pentagonal numbers is incorrectly given as:
   $$TCSS_5(n) = \frac{35n^2 - 55n}{2} + 3$$
   The correct formula is:
   $$TCSS_5(n) = \frac{35n^2 - 55n}{2} + 11$$

7. **Chapter 2, Formula for Octagonal Pyramidal Numbers on page 92:**
   The formula is incorrectly stated as:
   $$\frac{n(n+1)(6n-1)}{6}$$
   It should be:
   $$\frac{n(n+1)(6n-3)}{6}$$

8. **Chapter 2, Page 140:**
   The sequence of centered square pyramidal numbers incorrectly includes the number 111.
   This value should be excluded. The corrected sequence is:
   $$1, 6, 19, 44, 85, \cancel{111}, 146, 231, \ldots$$

9. **Chapter 2, Page 155 (Formula for Generalized Centered Tetrahedral Numbers):**
   The formula is incorrectly written as:
   $$S_3^3(n) = \frac{(2n-1)(n^2+n+3)}{3}$$
   The correct formula is:
   $$S_3^3(n) = \frac{(2n-1)(n^2-n+3)}{3}$$

10. **Chapter 2, Page 156 (Formula for Generalized Centered Square Pyramidal Numbers):**
    The formula is incorrectly given as:
    $$S_4^3(n) = \frac{(2n-1)(n^2-n+2)^2}{3}$$
    The correct formula is:
    $$S_4^3(n) = \frac{(2n-1)(n^2-n+2)}{2}$$

11. **Chapter 3, Page 188 (Hyperoctahedral Numbers):**
The term *hexadecahoron numbers* is used incorrectly.
The correct term is: *hexadecachoron numbers*.

12. **Chapter 3, Page 190 (Hypericosahedral Numbers):**
The term *hexacisihoron numbers* is used incorrectly.
The correct term is: *hexacosichoron numbers*.