CORRIGENDUM TO “THE MONIC INTEGER TRANSFINITE DIAMETER”

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It has been pointed out by Jan Hilmar [2] that the polynomial given in Table 5 of [1], \( t_M(b) = \frac{1}{3} \), regrettably does not have the property we claimed for it. The appearance of this polynomial was a computational oversight, and not caused by any failure of our algorithm for finding the polynomial. It should be replaced by

\[
P(x) = x^{45944640}(x^5 - 3x^4 + 7x^3 - 11x^2 + 6x - 1)^{1052898}
\]

\[
(x^7 - 1233x^6 + 2406x^5 - 1913x^4 + 791x^3 - 179x^2 + 21x - 1)^{1210840}
\]

\[
(x^9 + 14184x^8 - 34944x^7 + 6442x^6 - 20832x^5 + 7041x^4 - 1405x^3 + 153x^2 - 7)^{2571030}
\]

\[
(x^9 + 7812x^8 - 18072x^7 + 17561x^6 - 9271x^5 + 2864x^4 - 516x^3 + 50x - 2)^{595980}
\]

\[
(x^{14} - 11406261x^{13} + 47054086x^{12} - 88456310x^{11} + 100247244x^{10} - 76341256x^9 + 4120853x^8 - 16202606x^7 + 4609674x^6 - 999261x^5 + 159002x^4 - 16766x^3 + 1211x^2 - 52x + 1)^{2450525}.
\]

This new polynomial, of degree 126347760, has a maximum of \( \frac{1}{3} \) at \( x = \frac{1}{3} \) on the interval \([0, 0.465]\), showing that this interval has monic integer transfinite diameter \( \frac{1}{3} \).

We also note that in [2] Hilmar has disproved Conjectures 1 and 2 of [1].

REFERENCES


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