A341767 generalized and plotted in arbitrary bases

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The sequence A341767 can be generalized to any base $b > 1$: Let $a_b(n)$ be the number obtained by replacing each digit d in the base-b representation of n with the base-b digital root of n^d. The following pages contain plots of a_b for $b \in \{2, 3, ..., 20\}$.

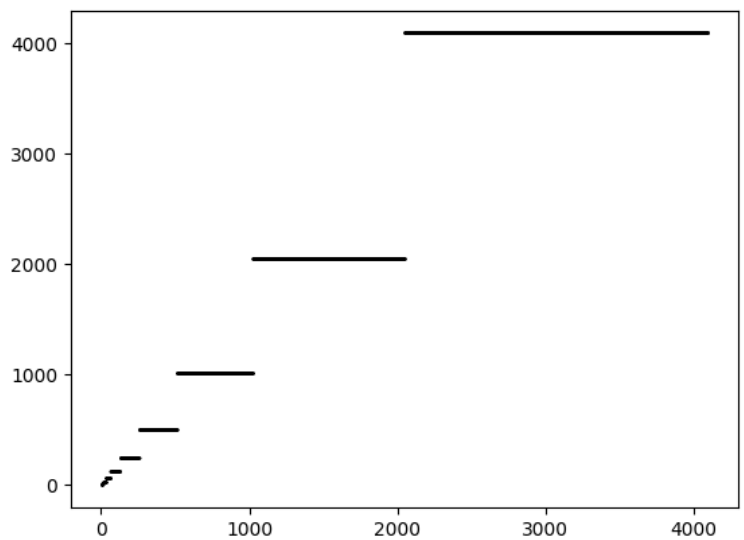

Figure 1: $a_2(n)$ for $n \in \{1, 2, ..., 2^{12} - 1\}$.

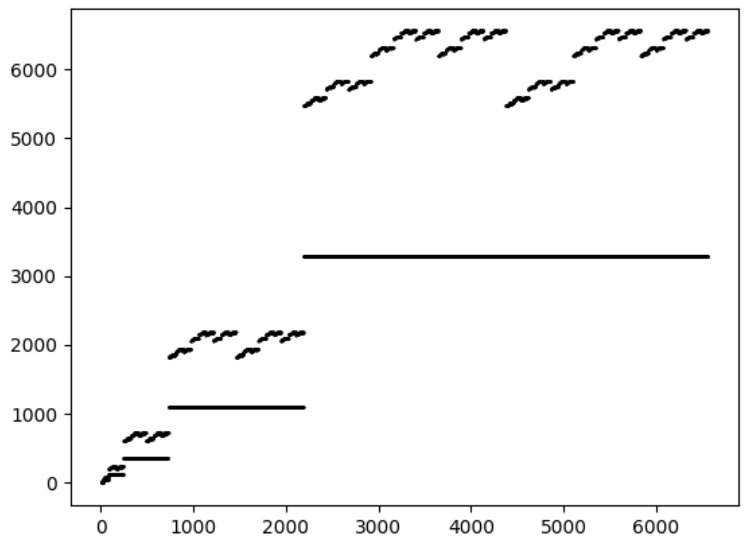

Figure 2: $a_3(n)$ for $n \in \{1, 2, ..., 3^8 - 1\}$.

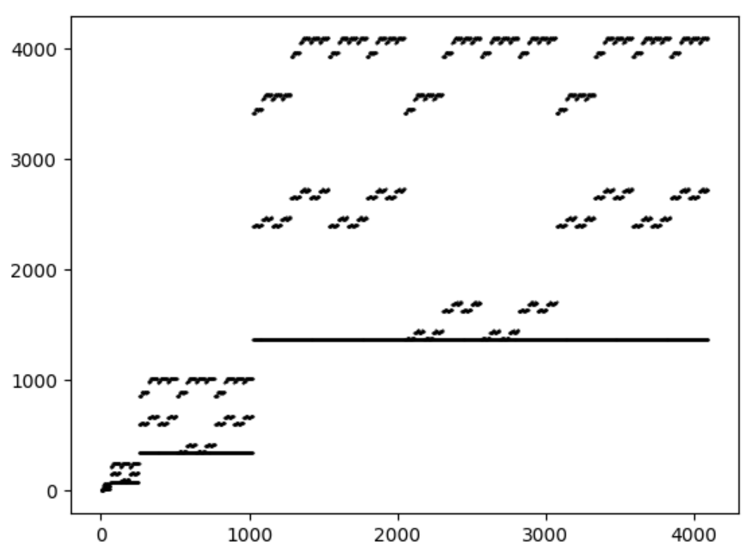

Figure 3: $a_4(n)$ for $n \in \{1, 2, ..., 4^6 - 1\}$.

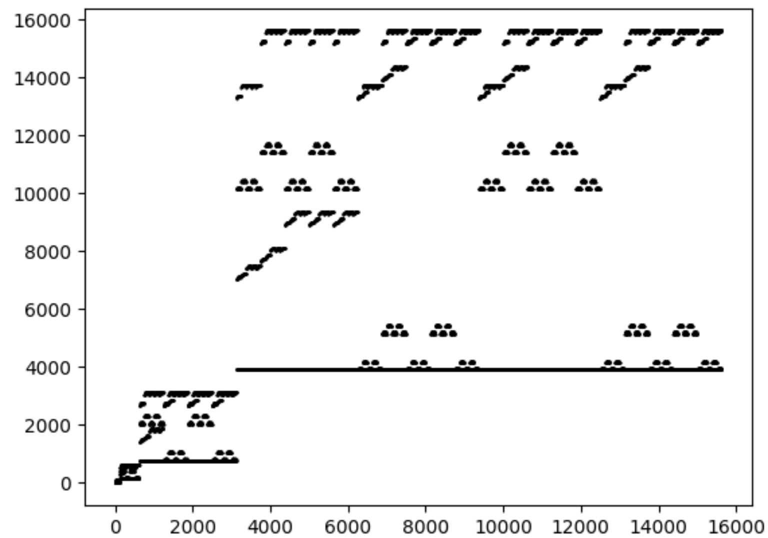

Figure 4: $a_5(n)$ for $n \in \{1, 2, ..., 5^6 - 1\}$.

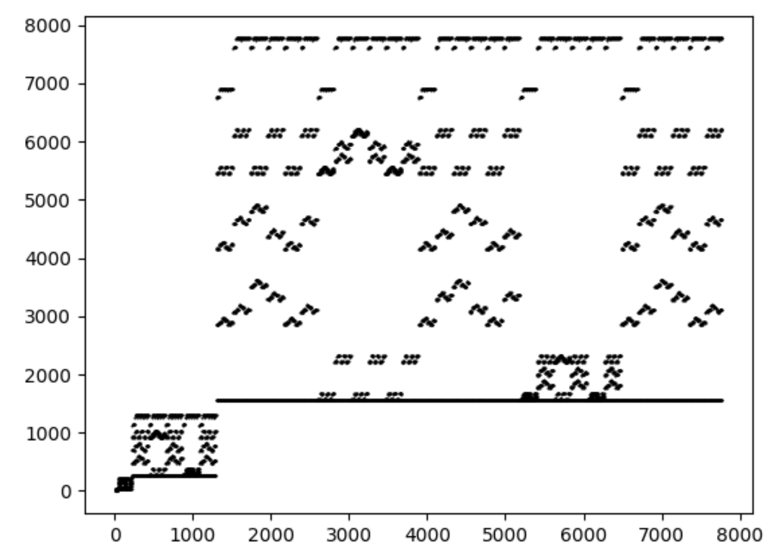

Figure 5: $a_6(n)$ for $n \in \{1, 2, ..., 6^5 - 1\}$.

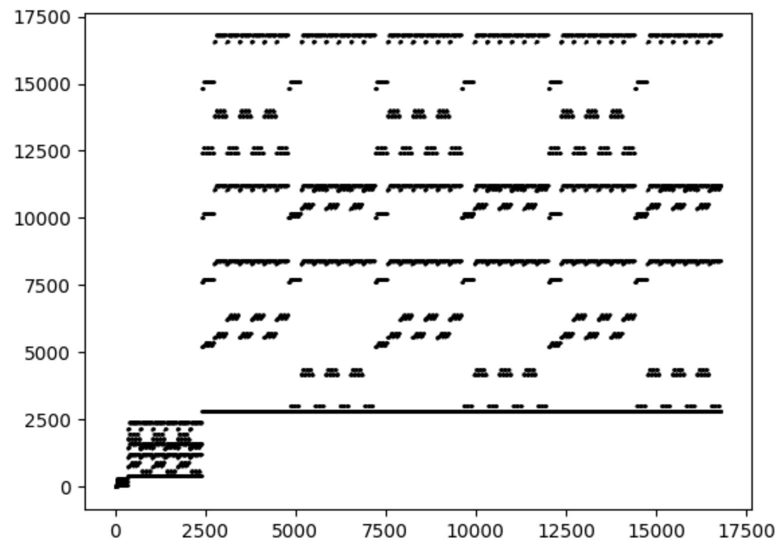

Figure 6: $a_7(n)$ for $n \in \{1, 2, ..., 7^5 - 1\}$.

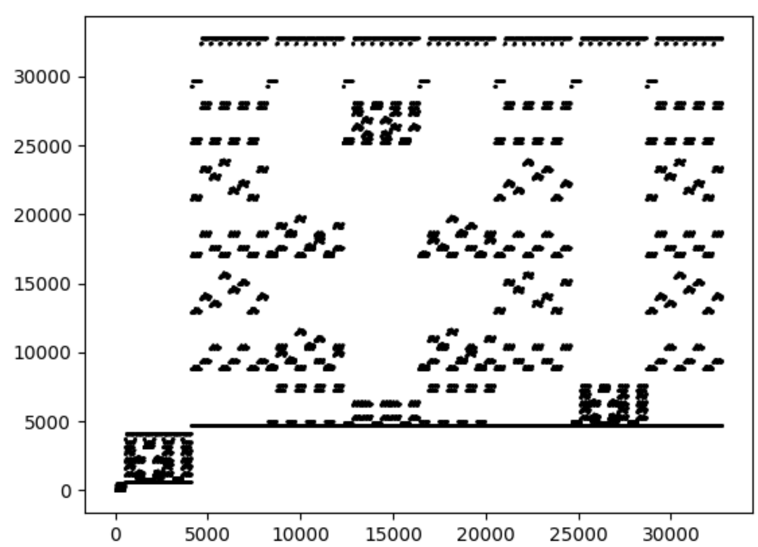

Figure 7: $a_8(n)$ for $n \in \{1, 2, ..., 8^5 - 1\}$.

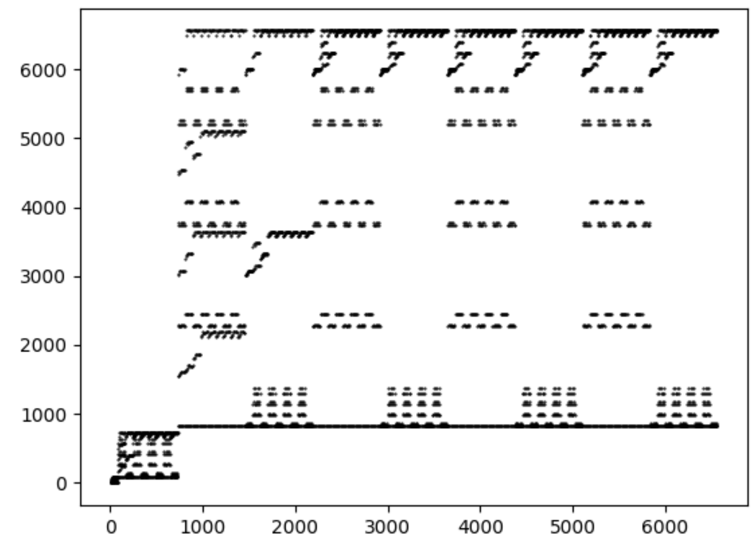

Figure 8: $a_9(n)$ for $n \in \{1, 2, ..., 9^4 - 1\}$.

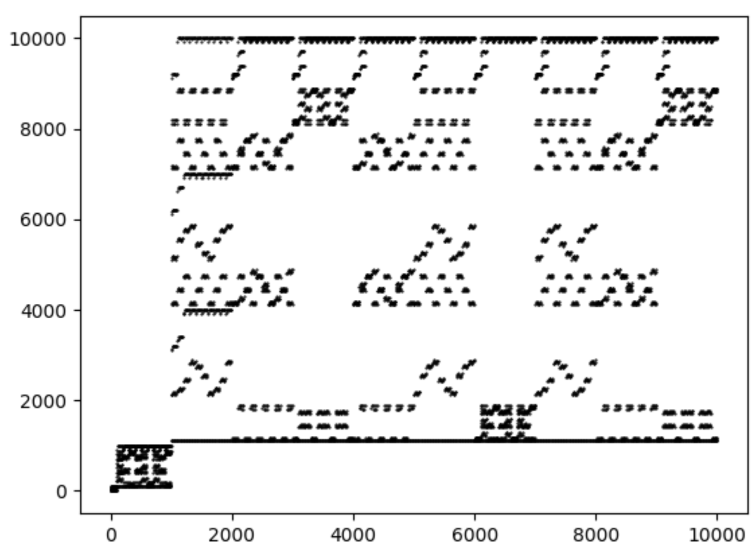

Figure 9: $a_{10}(n)$ for $n \in \{1, 2, ..., 10^4 - 1\}$.

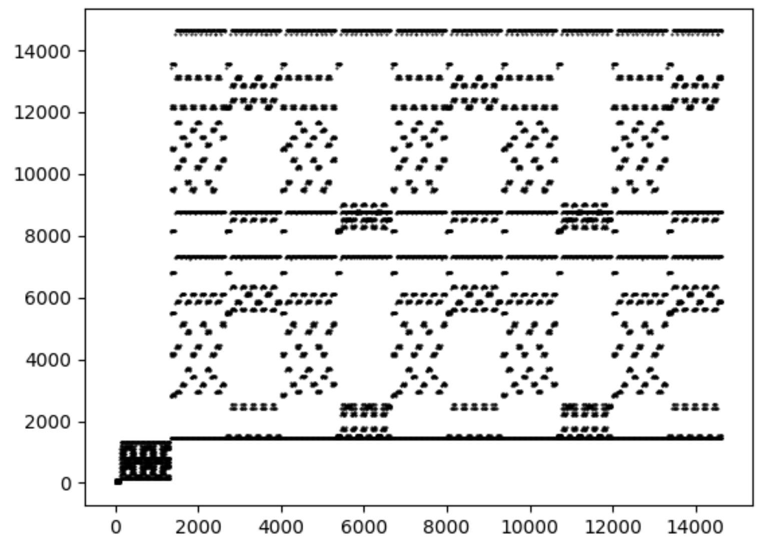

Figure 10: $a_{11}(n)$ for $n \in \{1, 2, ..., 11^4 - 1\}$.

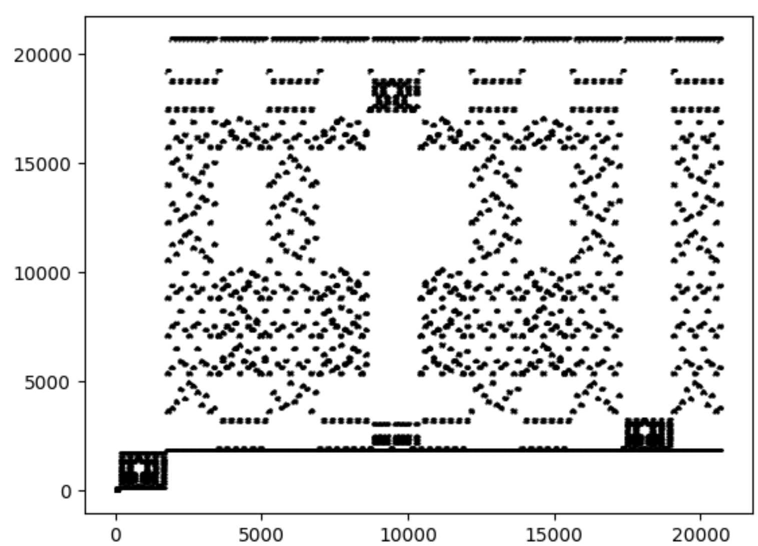

Figure 11: $a_{12}(n)$ for $n \in \{1, 2, ..., 12^4 - 1\}$.

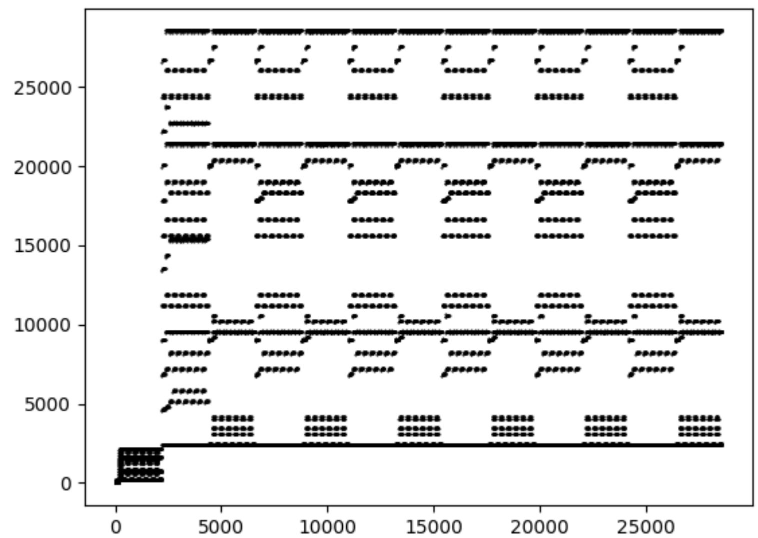

Figure 12: $a_{13}(n)$ for $n \in \{1, 2, ..., 13^4 - 1\}$.

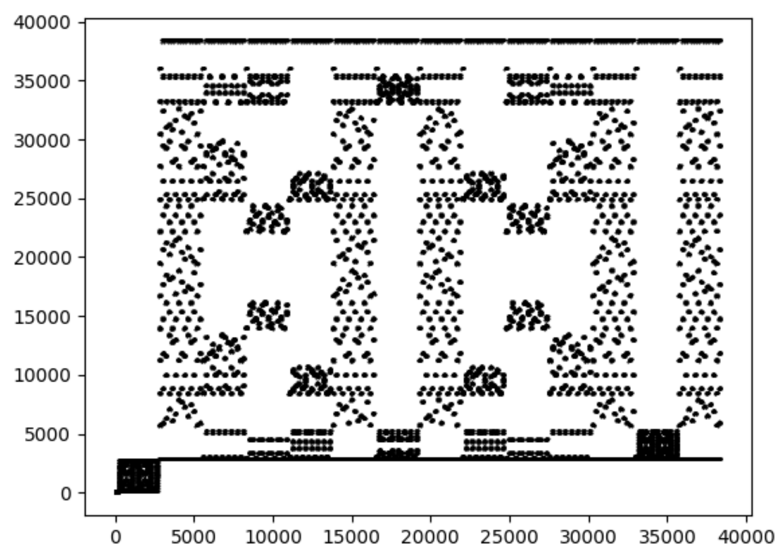

Figure 13: $a_{14}(n)$ for $n \in \{1, 2, ..., 14^4 - 1\}$.

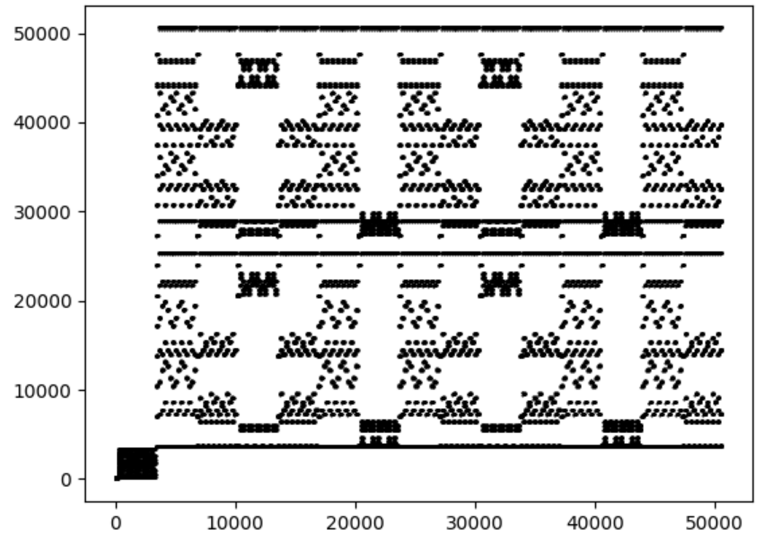

Figure 14: $a_{15}(n)$ for $n \in \{1, 2, ..., 15^4 - 1\}$.

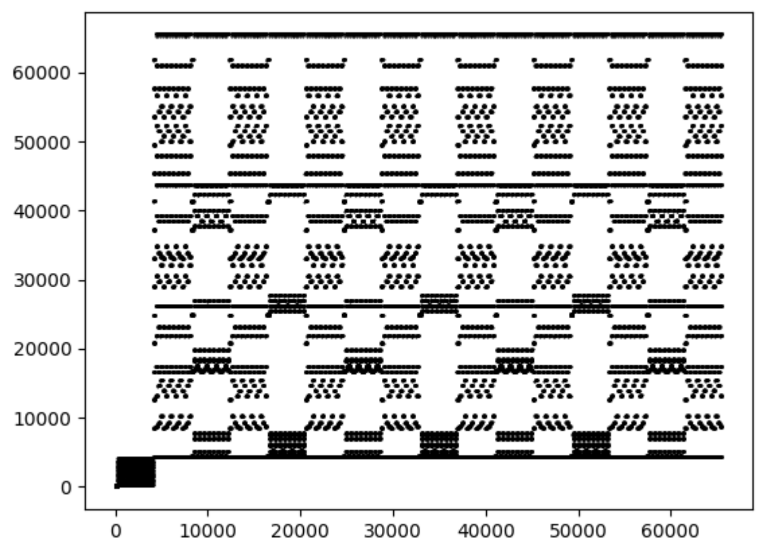

Figure 15: $a_{16}(n)$ for $n \in \{1, 2, ..., 16^4 - 1\}$.

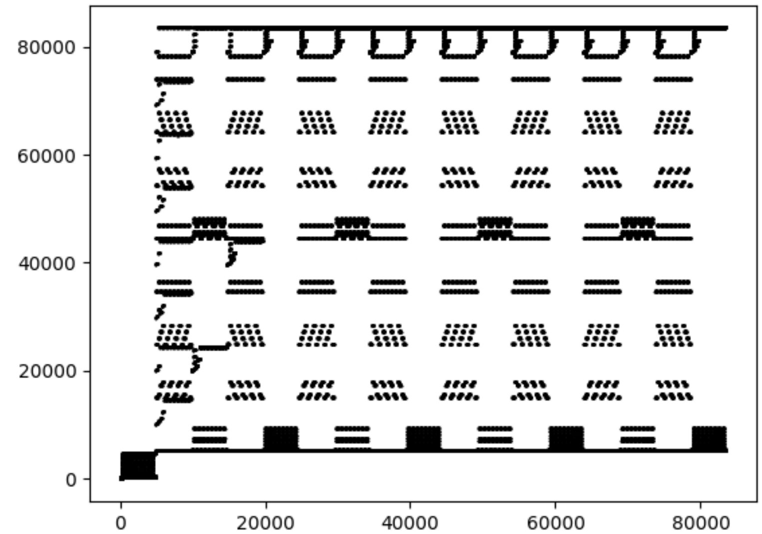

Figure 16: $a_{17}(n)$ for $n \in \{1, 2, ..., 17^4 - 1\}$.

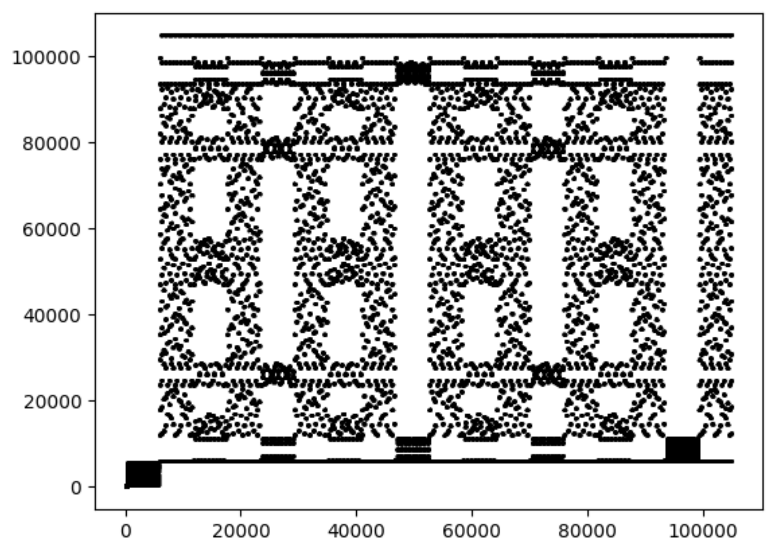

Figure 17: $a_{18}(n)$ for $n \in \{1, 2, ..., 18^4 - 1\}$.

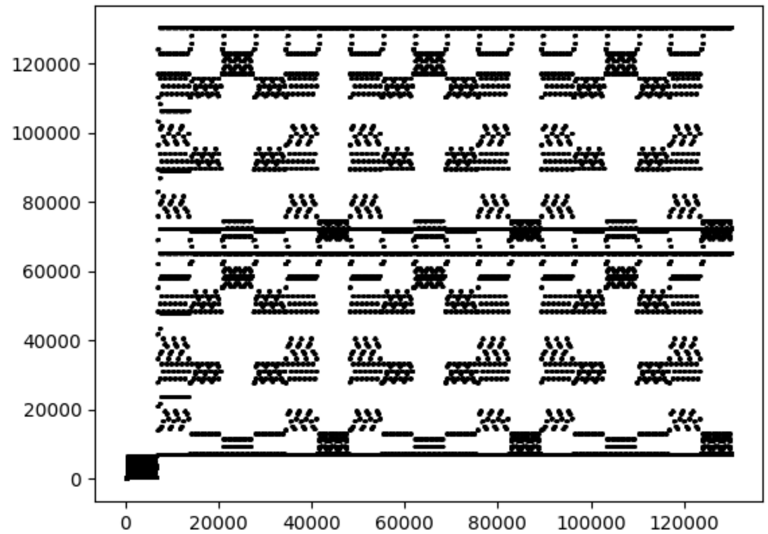

Figure 18: $a_{19}(n)$ for $n \in \{1, 2, ..., 19^4 - 1\}$.

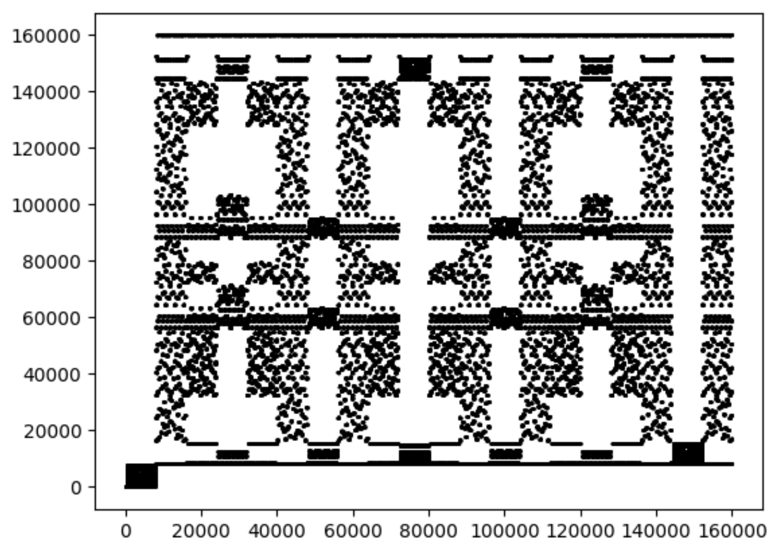

Figure 19: $a_{20}(n)$ for $n \in \{1, 2, ..., 20^4 - 1\}$.