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Beatty Sequences, Fibonacci Numbers, and the Golden Ratio,
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Abstract

$(\lfloor n\phi \rfloor)_{n \geq 1}$ and $(\lfloor n\phi^2 \rfloor)_{n \geq 1}$ are well-known complementary Beatty sequences. An infinite set of complementary Beatty sequences, based on a generalization of ratios of Fibonacci numbers and higher powers of ϕ , is proved. An open problem posed by Clark Kimberling, the *Swappage Problem*, is resolved in the affirmative as a special case of this set of complementary Beatty sequences.