Creating Prelude Music Using Number Patterns

Cheryl Whitelaw
Southern Utah University
whitelawcs@suu.edu

Wolfgang Amadeus Mozart wrote a musical dice game, a creative minuet that uses dice to put measures in order. There were 11 possible forms for each measure, except measures 8 and 16 only had two choices. Two dice were tossed, and the sum minus 1 is the form used. On the 8th and 16th measures, Form 1 would be used if the sum is odd and Form 2 if the sum is even. Thus there are $11^{14} \cdot 2^2$ ways this minuet could be played.

Using this same idea we could look at other famous classical music and write variations on a theme. For example Clementi's sonatinas offer a definite mathematical pattern for some of the phrases. For simplicity, I looked at two of his sonatinas that were written in the Key of C Major. I also considered Franz Shubert's dances with phrases of 8 measures.

Prelude music is music that is played before a program or service begins. The pianist or organist needs to be able to stop playing whenever the person conducting the meeting is ready to begin. I thought it would be fun to check number patterns in phrases and develop similar measures, then use Mozart's musical dice game idea to create almost endless prelude phrases. Participants in this session can try to find the number patterns in music and write possible measures to create prelude music. The last measure in the phrase needs to "complete" the phrase with a nice ending measure.