

Music by Chance?

Die Musikalisches Würfelspiel

Mozart wrote a sixteen measure minuet with eleven different possibilities for each measure. The performer chooses one of the eleven possibilities for each measure by rolling two dice. What is amazing is that Mozart wrote each of these measures so that no matter which combination is chosen, they fit together to make a pleasant piece of music!

Play a Musical Dice Game

Here are the measures for a simple four measure melody with which you can play the musical dice game. There is only one choice for the first measure. To choose each of the other three measures, roll the die. If you roll 1 or 4, choose choice 1 for that measure. If you roll 2 or 5 choose choice 2 and if you roll 3 or 6, choose choice 3. You can play your composition on the xylophone.

Some math questions:

- How many possible different four bar melodies can you make with this scheme?**
- Why do you think Mozart chose eleven for the number of different possibilities for each measure?**
- How many different minuets are possible in Mozart's scheme?**

- **What is the probability of choosing choice 1 for measure 2?**
- **What is the probability of choosing choice 1 for measure 2, choice 2 for measure 3, and choice 3 for measure 4?**

This website has another musical dice game which you can play online:

<http://sunsite.univie.ac.at/Mozart/dice/>