

1086-K1-2780 **Karl Schaffer*** (karl_schaffer@yahoo.com). *Mathematics and Ballet.*

Like many dance forms classical ballet uses codified movements, body positions and stage arrangements. We will look at mathematical aspects of a variety of ballet movements, sequences, and body positions. For example, the Fibonacci numbers and a variety of recursions arise in the ballet barre, a standard set of warm-up exercises at the beginning of the traditional ballet class. Ballet teachers often generate a large number of barre exercises from the simplest tendu movements. Symmetry principles also illuminate other aspects of this dance form including standard body placement and choreographed dance sequences. We will also look at how ballet contrasts or resembles several other classical dance forms with respect to these mathematical concepts. (Received September 25, 2012)