

**Mrs. Daniel- AP Stats**

**5.1 WS**

**The Golden Ticket**

At a local high school, 95 students have permission to park on campus. Each month, the student council holds a “golden ticket parking lottery” at a school assembly. The two lucky winners are given reserved parking spots next to the school’s main entrance. Last month, the winning tickets were drawn by a student council member from the AP Statistics class. When both golden tickets went to members of that same AP Stats class, some people thought the lottery had been rigged. There are 28 students in the AP Statistics class, all of whom are eligible to park on campus. Design and carry out a simulation using the Table of Random Digits to decide whether it’s **plausible** that the lottery was carried out fairly.

**State:**

**Plan:**

**Do:**

<b>Trial #</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>
<b>Numbers Selected</b>									
<b>Both in AP Stats?</b>									
<b>Trial #</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>17</b>	<b>18</b>
<b>Numbers Selected</b>									
<b>Both in AP Stats?</b>									

**Conclude:**

## NASCAR

In an attempt to increase sales, Cheerios decides to offer a NASCAR promotion. Each box of cereal will contain a collectible card featuring one of these NASCAR drivers: Jeff Gordon, Dale Earnhardt, Jr., Tony Stewart, Danica Patrick, or Jimmie Johnson.

The company says that each of the 5 cards is equally likely to appear in any box of cereal. A NASCAR fan decides to keep buying boxes of the cereal until she has all 5 drivers' cards. She is surprised when it takes her 23 boxes to get the full set of cards. Should she be surprised? Design and carry out a simulation using your graphing calculator to help answer this question.

**State:**

**Plan:**

**Do:**

<b>Trial #</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Numbers Selected					
Total # of Boxes					
<b>Trial #</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
Numbers Selected					
Total # of Boxes					
<b>Trial #</b>	<b>11</b>	<b>12</b>	<b>13</b>	<b>14</b>	<b>15</b>
Numbers Selected					
Total # of Boxes					
<b>Trial #</b>	<b>16</b>	<b>17</b>	<b>18</b>	<b>19</b>	<b>20</b>
Numbers Selected					
Total # of Boxes					

**Conclude:**