1. Create a numeric vector of length 100 where the first twelve elements are all 0 and the remaining cycle through the values 1, 2, 210.

2. Create a numeric vector corresponding to the following population. That is, there is one element in the vector for each unit in the population and the value of the element corresponds to the value in the table below.

<table>
<thead>
<tr>
<th>Value</th>
<th>0</th>
<th>0.5</th>
<th>1</th>
<th>1.5</th>
<th>2</th>
<th>4</th>
<th>7</th>
<th>30</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count</td>
<td>83</td>
<td>15</td>
<td>23</td>
<td>17</td>
<td>12</td>
<td>2</td>
<td>5</td>
<td>1</td>
<td>158</td>
</tr>
</tbody>
</table>

3. Create a $3 \times 4$ matrix where the first row contains all 1s, the second 2s, and the third 3s.

4. Remove the last row from a data frame $x$ with an unknown number of rows.

5. Set to zero all elements in a numeric vector $y$ that exceed 200.

6. Assign the first $n$ elements in the vector $y$ to the vector $tmp$.

7. Assign to the second element in list $z$ the character vector $\text{letters}$.

8. Assign the second element in list $z$ to the temporary variable $tmp$. Be sure to preserve the mode of the second element.

9. The data frame $\text{chips}$ contains variables $\text{Transistors}$, $\text{MIPS}$, $\text{Microns}$, $\text{Clock}$, and $\text{speed}$. Replace each value in $\text{Clock}$ by 1000 times its original value for only those cases that have a value of GHz for $\text{speed}$.

10. For list $w$ of length $m$ where each element is a numeric vector (of varying lengths), find the maximum value for each of the $m$ vectors.

11. Create a three-dimensional array filled with uniformly distributed random numbers. Find the sum of each “page” of numbers. (See the $\text{runif}$ function).

12. Simulate the distribution of the mean of a sample of size $n$ from a hypergeometric distribution. To do this, generate $N$ samples of size $n$ from the hypergeometric distribution and compute the $N$ means. (See the $\text{rhyper}$ function).