Homework 3: Lists and Loops

1. a. Create the vector with the following elements:
   agree, agree, missing, disagree, neutral, disagree, neutral, agree, missing, neutral
   Name the vector Opinions.
   b. Use one of the loop constructs (for, while, or repeat) to count the number of "missing" responses in the vector Opinions.
   c. Use one of the loop constructs (for, while, or repeat) to make another vector Opinions.updated by removing (deleting) components with the value "missing" from Opinions. Display the new vector. Note: the new vector should be shorter.
2. The problem contains a few steps.
   a. Create a list named **Roster** whose components are
      - A vector with components Mary, John, Lisa. Name the component **Name**.
      - A numeric vector called **GPA** with the components 3.5, 3.7,.2.9
      - A list named **Test.Scores** with two vector components:
        - Test 1: numeric vector (70, 80, 60)
        - Test 2: numeric vector (100, 95, 92)

      Use str() to display **Roster.**
   b. Use indexing to access the elements of **Roster** that contain information about Mary such as her GPA, and Test 1 score. Display the result as a vector with named components so it looks like as follows

Student	GPA	TEST 1
Mary	…	…

   c. For list **Test.Scores**, use function **lapply** or **sapply** to find the average scores on Test 1 and Test 2.
   d. Now add one more component to list **Roster**. The component should be named **Standing** and it is a vector with elements "senior"," freshman", "sophomore". Use **str( )** to display the updated list **Roster**.