**Instructions:**

**Write the answer to each question below the question in the space provided.   
You can “wrap-around” the answer on separate lines if you need more space.  
  
Part A: Display Results from Linux Commands using Regular Expressions**

Note the contents from the following tab-delimited file called **~osl640/tutorial9/numbers.txt:  
(this file pathname exists for checking your work)**

+123

---34

+++++++++++17

-45

45p8

25.6

11

**Write the results of each of the following Linux commands (complex and/or extended  
regular expressions) for the above-mentioned file.**

1. **grep "^[-+]" ~osl640/tutorial9/numbers.txt**
2. **grep "^[-+]\*.[0-9]" ~osl640/tutorial9/numbers.txt**
3. **grep "^[+-]?[0-9]" ~osl640/tutorial9/numbers.txt  
     
     
   (why?)**
4. **egrep "^[+-]?[0-9]" ~osl640/tutorial9/numbers.txt  
     
     
     
     
     
     
   (continued on next page)**
5. **egrep "^[+-]?[0-9]+$" ~osl640/tutorial9/numbers.txt**
6. **egrep "^[+-]?[0-9]+[.]?[0-9]+$" ~osl640/tutorial9/numbers.txt**

**Part B: Writing Linux Commands Using Extended Regular Expressions**

**Write a single Linux command to perform the specified tasks for each of the following questions.**

1. **Write a Linux command to display all lines in the file called ~/data.txt that begins with 1 or more occurrences of an UPPERCASE letter.**
2. **Write a Linux command to display all lines in the file called ~/data.txt that ends with 3 or more occurrences of the number 6.**
3. **Write a Linux command to display all lines in the file called ~/data.txt that begins with 2 or more occurrences of the word “the” (upper or lower case).**
4. **Write a Linux command to display all lines in the file called ~/data.txt that begins with 2 or more occurrences of the word “the” or the word “but” (upper or lower case).**
5. **Write a Linux command to display all lines in the file called ~/data.txt that begins with a minimum of 2 occurrences and a maximum of 4 occurrences of the word “the” or the word “but”   
   (upper or lower case).**