

Exercises, Week 1, Day 1

1. Write a script that prints out the numbers from -5 to +5, inclusive. There are at least four ways of doing this. See how many you can get.
2. Write a function that accepts an integer and returns a list of the factors of that number. (Note: A factor is any integer that can be multiplied to give the target number. The factors of 3 are [1, 3], of 6 are [1, 2, 3, 6], of 15 are [1, 3, 5, 15].)
3. Write a function that takes two strings and calculates the Hamming distance between them. (Note: given two strings of equal lengths, the Hamming distance is the number of differences between them, i.e. the number of substitutions required to make them identical.)
4. Modify it to allow case-sensitive comparison.
5. Modify it to catch possible errors in the entry data.
6. Write a function that asks the user for a phrase and then prints that phrase flanked above and below with lines of asterisks of equal length. For example:

```
*****  
My example phrase  
*****
```

7. When converting between degrees Celcius & Fahrenheit, 0 C equals 32 F, while 100 C is 212 F. Write functions that convert Celcius to Fahrenheit and vice versa.
8. Write standalone scripts that accept commandline arguments and do the same.
9. Write a single function or script that can handle both conversions, depending on passed arguments.