Python 3

Question 1:

Write a program taking three numbers from the user and print the greatest values. Write a series of test you would use to check the correctness of your program.

Question 2: Not applicable to students!

Many companies pay time-and-a-half for any hours worked above the 40 in a given week. Write a program to input the number of hours worked in a week and the hourly rate and calculate the total wages for the week. It should also indicate the wages paid in overtime.

Question 3: You've been fined!

The speeding ticket fine policy in Blotsville is £100 plus £5 for each mph over the limit plus a penalty of £200 for any speed over 90 mph. Write a program that accepts a speed limit and a clocked speed and either prints a message indicating the speed was legal or prints the amount of the fine, if the speed is illegal.

Question 4: Having a date?

1. A year is a leap year if it is divisible by 4, unless it is a century year that is not divisible by 400. For example 1800 and 1900 are not leap year while 1600 and 2000 are. Write a program that calculates whether a year is a leap year or not
2. Write a program that accepts a date in the format DD/MM/YYYY and output whether or not the date is valid. For example 20/07/1969 is valid, but 31/09/2012 is not.

Problem I:

We want to write a small program to calculate the bill for renting a movie or a game in a shop. The price for a movie depends on the media, £2.50 for a DVD and £3.50 for a Blue Ray. The price for a game depends on how new it is, if it's a new release the cost is £4.00, £2.50 otherwise.

The basic

You should write a menu (or series of menu and sub-menu) where the user can choose one of the option. Depending on the option chosen, you should display the final bill. You should take into account that the user may enter an invalid option.

Preparing for the future

Justify your choice of using a single menu, or a series of menus and sub-menus. How difficult would it be to change your code if we want to add more options, such as VHS, Xbox, Playstation, Wii, and Music?

Question 1:

Video: http://www.youtube.com/watch?v=JvtgfRkRzQo&feature=channel&list=UL

Test harness:

x	y	z
1	2	3
2	3	1
3	2	1
3	1	2
2	1	3
1	3	2