Basecamp Challenge Treasure Hunt

Part II

1. Try to find the ‘system’ in this number series and calculate the sum of the first 100 numbers:

12,13,15,17,111,113,117,119,123,129,131,137,141,….

1. Calculate:

1+2-3-4+5+6+7-8-9-10-11+12+13+14+15+16-17-18-19-20-21-22+23+24+25+26+27+28+29-30- 31-32-33-34-35-36-37+38+39+40+41+42+43+44+45+46-47- … -500

1. Alice, Bob, Chris and Diana are trying to loose weight.

At the begin of the year their weights are: 60,80,75,65 kg.

If they live ‘normally’ the weights keep constant, but sometimes they are weak and sometimes they are strong.

6 hamburgers make you 1 kg heavier 3 fitness make you 1 kg lighter

9 beers make you 1 kg heavier 15 walks make you 1 kg lighter

8 milkshakes make you 1 kg heavier 100 staircases make you 1 kg lighter

In upsanddowns.py you find: day numbers and the activities of the 4 friends on that day.

What is the sum of their weights at the end of the year? (round to nearest integer)

1. Alice is visiting a farm. It has LOTS of animals.

You can find them in animal.py

The animals have different values :

Dog 200

Sheep 300

Cow 500

Horse 700

Cat 100

What is the total value of the stock?

1. Look at the string 12345678987654321. If you replace one of the even numbers by a + and another even number by a \* , you get expressions like:

12345+7898765\*321 with value 2535515910.

One of the possibilities produces a value ending with 985. Which value is that?

1. If a, b and c are chosen correctly, this program (usaflag.py) produces a historical correct picture. What is the sum of a, b and c?
2. Anagram numbers

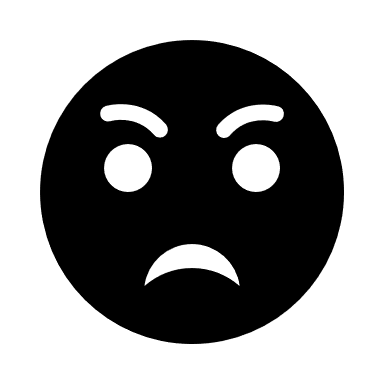
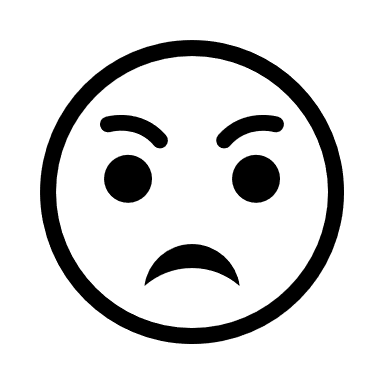
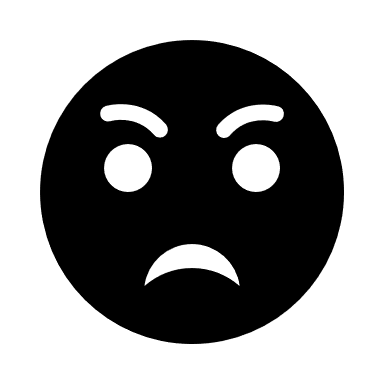
484676408044494469696698896400800469484964000800044040904046173237164000080000463783223873612110201123211464194249100200112343215221225100020001102030201104060401121242121123454321125686521522808225942060249100002000011022141220112102420121123456543

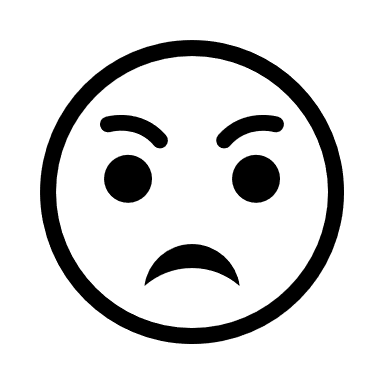
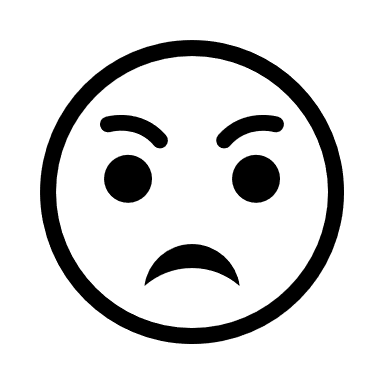
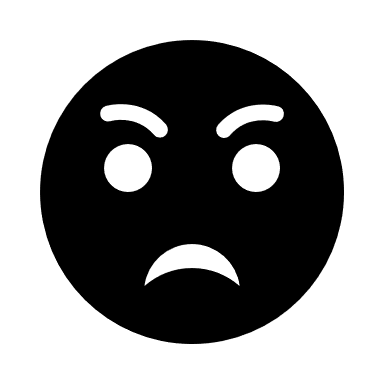
Some of the substrings in this string have the following properties:

* It is a square
* It is a palindrome

Can you find the largest?

1. This is an octal number. Each face represents one of the digits 0, 1, 2 ……7. (The number has 3 different digits as you can see)





If you convert it to decimal the last three digits are 736.

Enter the first three digits of this decimal number.

1. Look at this string:



If you make a substring it is always a hexadecimal number. For example d72 or 1179c2.

We are looking for the substring with the highest hexadecimal value that has the following properties:

* The length is 5
* It has 5 different digits
* There is no f in it

If you have found it, convert it to decimal.

1. Only solvable with hints….. (unless you are an experienced cryptologist)

