1) One thing computers are very, very good at is arithmetic. This problem will show you how to make the computer test how good you are at it. (The computer is probably about 2,000,000,000 times faster than you, but for now we'll only test how accurate you are.)

Planning it out

When you start to think about writing a program, it's helpful to begin by thinking exactly what will usually happen when the program runs. It'll probably go something like this:

> What's 6 times 7? 49
>
> No, I'm afraid the answer is 42.
>
> What's 3 times 2? 6
>
> That's right -- well done.
>
> And so on, with several more questions. . .
>
> What's 5 times 9? 45
>
> That's right -- well done.
>
> I asked you 10 questions. You got 7 of them right.
>
> Well done!

So, here are some things we need to be able to make the computer do:

- Choose numbers (at random, preferably)
- Display a sum
- Calculate the right answer
- Get an answer from the person using the program
- See whether it's right or not
- Display a "that's right" or "that's wrong" message
- Keep count of how many questions were answered right
- Ask a total of (say) 10 questions, and then stop
- Display a final message saying how you've done

Tips

import random

random.choice(range(1,10)) will pick a number randomly form 1 to 9

x= input("enter a number - ") will ask enter a number and what ever you entered will get stored in x.

2) In this problem, we'll write a simple guessing game: the computer (or, another player) picks a number, and you have to guess it. You get told after each guess whether the guess was too high or too low.

A typical game might go something like this:

OK, I've thought of a number between 1 and 1000.

Make a guess: 200

That's too low.

Make a guess: 500

That's too high.

Make a guess: 345

That's too high.

Make a guess: 300

That was my number. Well done!

You took 4 guesses.

Would you like another game? no

OK. Bye!

So, the program needs to do the following things.

- Choose a number somehow, and tell the player that it's done so.
- Repeatedly:
  - Ask the player for a number
  - Report on whether it's too high, too low or just right

  (Do this until the player guesses the answer.)
- Keep track of the number of guesses the player made.
- Finally, report on the player's performance and offer the chance of another game.
- If they want another game, start over again.

Tips

use random to generate the guess

to go for an infinite loop use while True: