**Worksheet 4: Loops**

1. Put a tick next to each **print** statement if you think the **while()** loop will run.  
   Put a cross next to each program if you think it won’t.

|  |  |  |
| --- | --- | --- |
| **Program** | | **Will the loop run?** |
| **A** | score = 200  while score < 150:  print("... |  |
| **B** | score = 200  while score > 150:  print("... |  |
| **C** | name = "Fred"  while name != "Fred":  print("... |  |
| **D** | answer = 42  while answer == 42:  print("... |  |

1. How many times will each of these **for()** loops run?

|  |  |  |
| --- | --- | --- |
| **Program** | | **How many times will the loop run?** |
| **A** | for counter in range(10): |  |
| **B** | for counter in range(20): |  |
| **C** | for counter in range(1,20): |  |
| **D** | for counter in range(3,23): |  |

1. For each situation, say whether it would be best to use a **while()** loop or a **for()** loop.

|  |  |  |
| --- | --- | --- |
| **Program** | | **Which kind of loop?** |
| **A** | I need a program that will keep letting me add money to a piggy bank until I get to £100. |  |
| **B** | I need a program that will keep letting me add a monthly payment for 12 months. |  |
| **C** | I need a guessing game program that will let me keep guessing until I get the right answer. |  |
| **D** | I need a revision program that will run through revision questions 4 times. |  |

1. Try writing the code to create these loop statements:
   1. A program that will keep letting me add money to a piggy bank untIl I get to £100.

* 1. A program that will let me keep adding a monthly payment for 12 months.