



## While loops

No.	Title	Description	Completed	Play
1	Add Numbers	Create a function addNumbers(x) that takes a number as an argument and adds all the integers between 1 and the number (inclusive) and returns the total number.	✓	▶ (/quiz/view_question/s5-q1)
2	Add Numbers II	Create a function addNumbers(start, end) that adds all the integers between the <b>start</b> and <b>end</b> value (inclusive) and returns the total sum.	✓	▶ (/quiz/view_question/s5-q2)
3	[MCQ] Using 'break' in 'while' loop	The 'break' statement can be used to terminate the 'while' loop.	✓	▶ (/quiz/view_question/s5-q3)
4	Count pages in a book	Create a function countPages(x) that takes the number of pages of a book as an argument and counts the number of times the digit '1' appears in the page number.	✓	▶ (/quiz/view_question/s5-q4)
5	[MCQ] Using 'break' in 'while' loop	The 'break' statement can be used to terminate the 'while' loop.	✓	▶ (/quiz/view_question/s5-q5)

No.	Title	Description	Completed	Play
6	Factorial(n)	Create a function factorial(x) that takes an integer and returns the product of all the positive integers less than or equal to n.	✓	▶ (/quiz/view_question/s5-q6)
7	Double Factorial(n)	Create a function doubleFactorial(n) that takes an odd integer and returns the product of all odd values up to the value n (where n=2k-1).	✓	▶ (/quiz/view_question/s5-q7)
8	Prime Numbers	Create a function that takes in a positive integer and return a list of prime numbers. A <b>prime</b> number is only divisible by 1 and itself.	✓	▶ (/quiz/view_question/s5-q8)
9	Square Root Approximation	Create a function that takes in a positive number and return 2 integers such that the number is between the squares of the 2 integers. It returns the same integer twice if the number is a square of an integer.	✓	▶ (/quiz/view_question/s5-q9)
10	pi Approximation	Create a function that computes the approximation of pi, based on the number of iterations specified.	✓	▶ (/quiz/view_question/s5-q10)
11	Estimate pi	Write a function estimatePi() to estimate and return the value of pi based on the formula found by an Indian Mathematician Srinivasa Ramanujan. It should use a while loop to compute the terms of the summation until the last item is smaller than 1e -15. The formula for calculating distance is given below: $\frac{1}{\pi} = \frac{2\sqrt{2}}{9801} \sum_{k=0}^{\infty} \frac{(4k)!(1103 + 26390k)}{(k!)^4 396^{4k}}$ where $k!$ is the factorial of $k$ .	✓	▶ (/quiz/view_question/s5-q11)
12	Prime Factorization	Given a positive integer, write a function that computes the prime factors that can be multiplied together to get back the same integer.	✓	▶ (/quiz/view_question/s5-q12)
13	Lowest Common Multiple	The smallest common multiple of two or more numbers is called the lowest common multiple (LCM). Given a list of integers, find the lowest common multiple.	✓	▶ (/quiz/view_question/s5-q13)

