

NUMBER THEORY

1. Write a program to print the 10th Fibonacci number. Consider the first Fibonacci number to be 1 (answer should be 55).
2. Write a program to print the 500th prime number (answer should be 3,571)
3. Write a program to print the 20th hexagonal number (answer should be 780)
4. Write a program to print the 6th fermat number (answer should be 4294967297)
5. Write a program to print the sequence of numbers in the collatz conjecture with a starting number of 7 and ending number of 1. (The expected sequence printed should be 7, 22, 11, 34, 17, 52, 26, 13, 40, 20, 10, 5, 16, 8, 4, 2, 1, 4, 2, 1. Print in whichever format is easy for you)