A big sum 2

[Award] **12 pts**

[Category] **Math**

Let



where is the largest integer less than or equal to *x*.

You are given S(1, 10) = 1182, S(3, 100) = 16716537706541 and S(10, 104) mod 1000000007 = 211872856.

Find S(20, 1020) mod 1000000007.

[Answer] **396804717**