Question about arrays in MIPS:

Consider the following MIPS code fragment:

```mips
.data
# stored in A are squares of first 7 primes, zero at end
A: .word 4, 9, 25, 49, 121, 169, 289, 0
.text
# insert MIPS instructions here.
```

For insertion at the comment, write a single MIPS program that will do all of the following (not item-by-item, but all at once):

1. Put the starting address of A into register $s1.
2. Inside a loop, access each element of A and add these values, leaving the result in register $s2. [You must use a loop for this.]
3. Print the resulting sum, using syscall. [Recall that syscall requires $v0 equal to 1 to print the value in $a0.]

Your MIPS code should do what is asked for above and nothing more.