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Sol:-

```
        MOV  r0, 1
        mov  r1, 0
        mov  r2, 0
        mov  r10, 0

loop a:
        mov  r1, r1+1
        mul  r3, r1, r1
        mul  r3, r3, r1   # cube of r1
        cmp  r3, r0
        mov  r2, r1
        b.lt .loop b
        mov  r0, r0+1
        mov  r1, 0
        mov  r2, 0
        mov  r10, 0
        mul  r6, r0, r0.
        mul  r6, r6, r0.
        .loop a.

loop b:
        mov  r2, r2+1
        mul  r4, r2, r2
        mul  r4, r4, r2
        add  r5, r3, r4
        cmp  r5, r6.
```

```
beq . increment _r10
    cmp  r10, 2
     beq . end.
     cmp  r4, r0 .
     bit . loop b.
        . loop a
           increment _r10;
                add  r10, r10#);
        end :
                exit
```

final Answer :- r10.