

1. CMAX = 1

```
>> sum_squares(1)
count = 1
root = 1.000000
diff = 0.000000
sum = 1.000000

ans = 1
```

2. CMAX = 21

```
>> sum_squares(21)
count = 1
root = 1.000000
diff = 0.000000
sum = 1.000000

count = 2
root = 1.414214
diff = 0.414214
sum = 1.000000

count = 3
root = 1.732051
diff = 0.732051
sum = 1.000000

count = 4
root = 2.000000
diff = 0.000000
sum = 5.000000

count = 5
root = 2.236068
diff = 0.236068
sum = 5.000000
```

```
count = 6  
root = 2.449490  
diff = 0.449490  
sum = 5.000000
```

```
count = 7  
root = 2.645751  
diff = 0.645751  
sum = 5.000000
```

```
count = 8  
root = 2.828427  
diff = 0.828427  
sum = 5.000000
```

```
count = 9  
root = 3.000000  
diff = 0.000000  
sum = 14.000000
```

```
count = 10  
root = 3.162278  
diff = 0.162278  
sum = 14.000000
```

```
count = 11  
root = 3.316625  
diff = 0.316625  
sum = 14.000000
```

```
count = 12  
root = 3.464102  
diff = 0.464102  
sum = 14.000000
```

```
count = 13  
root = 3.605551  
diff = 0.605551  
sum = 14.000000
```

```
count = 14  
root = 3.741657  
diff = 0.741657
```

```
sum = 14.000000
```

```
count = 15  
root = 3.872983  
diff = 0.872983  
sum = 14.000000
```

```
count = 16  
root = 4.000000  
diff = 0.000000  
sum = 30.000000
```

```
count = 17  
root = 4.123106  
diff = 0.123106  
sum = 30.000000
```

```
count = 18  
root = 4.242641  
diff = 0.242641  
sum = 30.000000
```

```
count = 19  
root = 4.358899  
diff = 0.358899  
sum = 30.000000
```

```
count = 20  
root = 4.472136  
diff = 0.472136  
sum = 30.000000
```

```
count = 21  
root = 4.582576  
diff = 0.582576  
sum = 30.000000
```

```
ans = 30
```

3. CMAX = 38

```
>> sum_squares(38)
count = 1
root = 1.000000
diff = 0.000000
sum = 1.000000

count = 2
root = 1.414214
diff = 0.414214
sum = 1.000000

count = 3
root = 1.732051
diff = 0.732051
sum = 1.000000

count = 4
root = 2.000000
diff = 0.000000
sum = 5.000000

count = 5
root = 2.236068
diff = 0.236068
sum = 5.000000

count = 6
root = 2.449490
diff = 0.449490
sum = 5.000000

count = 7
root = 2.645751
diff = 0.645751
sum = 5.000000

count = 8
root = 2.828427
diff = 0.828427
sum = 5.000000

count = 9
```

```
root = 3.000000  
diff = 0.000000  
sum = 14.000000
```

```
count = 10  
root = 3.162278  
diff = 0.162278  
sum = 14.000000
```

```
count = 11  
root = 3.316625  
diff = 0.316625  
sum = 14.000000
```

```
count = 12  
root = 3.464102  
diff = 0.464102  
sum = 14.000000
```

```
count = 13  
root = 3.605551  
diff = 0.605551  
sum = 14.000000
```

```
count = 14  
root = 3.741657  
diff = 0.741657  
sum = 14.000000
```

```
count = 15  
root = 3.872983  
diff = 0.872983  
sum = 14.000000
```

```
count = 16  
root = 4.000000  
diff = 0.000000  
sum = 30.000000
```

```
count = 17  
root = 4.123106  
diff = 0.123106  
sum = 30.000000
```

```
count = 18  
root = 4.242641  
diff = 0.242641  
sum = 30.000000
```

```
count = 19  
root = 4.358899  
diff = 0.358899  
sum = 30.000000
```

```
count = 20  
root = 4.472136  
diff = 0.472136  
sum = 30.000000
```

```
count = 21  
root = 4.582576  
diff = 0.582576  
sum = 30.000000
```

```
count = 22  
root = 4.690416  
diff = 0.690416  
sum = 30.000000
```

```
count = 23  
root = 4.795832  
diff = 0.795832  
sum = 30.000000
```

```
count = 24  
root = 4.898979  
diff = 0.898979  
sum = 30.000000
```

```
count = 25  
root = 5.000000  
diff = 0.000000  
sum = 55.000000
```

```
count = 26  
root = 5.099020  
diff = 0.099020  
sum = 55.000000
```

```
count = 27  
root = 5.196152  
diff = 0.196152  
sum = 55.000000
```

```
count = 28  
root = 5.291503  
diff = 0.291503  
sum = 55.000000
```

```
count = 29  
root = 5.385165  
diff = 0.385165  
sum = 55.000000
```

```
count = 30  
root = 5.477226  
diff = 0.477226  
sum = 55.000000
```

```
count = 31  
root = 5.567764  
diff = 0.567764  
sum = 55.000000
```

```
count = 32  
root = 5.656854  
diff = 0.656854  
sum = 55.000000
```

```
count = 33  
root = 5.744563  
diff = 0.744563  
sum = 55.000000
```

```
count = 34  
root = 5.830952  
diff = 0.830952  
sum = 55.000000
```

```
count = 35  
root = 5.916080  
diff = 0.916080
```

```
sum = 55.000000
```

```
count = 36
```

```
root = 6.000000
```

```
diff = 0.000000
```

```
sum = 91.000000
```

```
count = 37
```

```
root = 6.082763
```

```
diff = 0.082763
```

```
sum = 91.000000
```

```
count = 38
```

```
root = 6.164414
```

```
diff = 0.164414
```

```
sum = 91.000000
```

```
ans = 91
```