Scan   6785
                        etc

Brendan McKay

emails

add to several

6785
−6787
5007

```
cat newseqs31
From anucsd.anu.edu.au!bdm Tue Jul 23 16:42:48 EST 1991
Received: by gauss; Tue Jul 23 02:44:12 EDT 1991
Received: by inet.att.com; Tue Jul 23 02:44 EDT 1991
Received: from tyl (tyl.anu.edu.au) by anucsd.anu.edu.au (4.1/SMI-4.0)
        id AA14806; Tue, 23 Jul 91 16:42:48 EST
Date: Tue, 23 Jul 91 16:42:48 EST
From: bdm@anucsd.anu.edu.au (Brendan McKay)
Message-Id: <9107230642.AA14806@anucsd.anu.edu.au>
To: njas@research.att.com
Subject: Moorish Sequences
Status: R
```

>Brendan, I am revising The handbook of Integer Sequences (finally).

Great idea. You will sell at least one!

>Here is one of yours:
>
>%S A5007 1,2,2,1,2,8,6,1,1,0,1,2,9
>%N A5007 Generalized Moore graphs with $2n nodes.
>%R A5007 LNM 748 23 79.
>%O A5007 2,2

Hi Neil, Sorry about the delay in replying.

>%S A5007 1,2,2,1,2,8,6,1,1,0,1,2,9   should be
         1,2,2,1,2,7,6,1,1,0,1,2,9,40.
                       ^   ^^

The 8 should be 7 because two of the eight graphs found in an earlier
paper were isomorphic. This error has never been corrected in print,
I think, so the only reference is personal communication from me.
The next value is 40, as on the first line on p25 of the same article.
The values for 32 and 34 are nonzero but not known. (They would be quite
easy to find, I think, given that I have about 100 times as much computer
power now as I did then. Maybe one day, but not soon.) After that, nothing
is known until 44-56, which are all zero. It is not known if there are infinitely many nonzero

Here are some sequences you might not have. I found them by computing all
the graphs (unpublished). Are they new?

n	tf(n)	sf(n)	g5(n)
1	1	1	1
2	2	2	2
3	3	4	3
4	7	8	6
5	14	18	11
6	38	44	23
7	107	117	48
8	410	351	114
9	1897	1230	293
10	12172	5069	869
11	105071	25181	2963
12	1262180	152045	12066
13	20797002	1116403	58933
14		9899865	347498

tf(n) = number of nonisomorhic triangle-free graphs on n vertices
sf(n) = number of nonisomorhic square-free graphs on n vertices
        (a square is a cycle of length 4, not necessarily chord-free)
g5(n) = number of nonisomorphic triangle-and-square-free graphs on
        n vertices (i.e., graphs with girth >= 5).

I am going to find at least one more value in each list, and will
send them when I do.

Are you collecting new sequences, or just revising old ones?
Probably I have quite a few that didn't appear in the original edition.

Cheers, Brendan.

you have mail
gauss$