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A6530
A984
A70229
A2387
A115515

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Dear Neil,

Happy Birthday! I am sure you are looking forward to it.

Between letters I try to accumulate odds and ends of sequences which may be of interest to you, but I don't find many. A few items:

1) $\int_0^\infty \frac{dx}{(x^2+1/4)^n} = K_n \pi$

K_n is given by Seq. 643. A984

2) See Am. Math. Mo. March 1980, p. 208 for various sequences relating to postage stamps.

3) Daughter Anne asked me if I could extend 2, 4, 6, 6, 10, 9, 14, 10, 12, 15, 22, 15, 26, 21, 20, ... I couldn't, so she told me that the nth term is the sum of n and the largest prime number in n. Perhaps the first term should be 1, not 2. A70229

6530 I note that the sequence of greatest prime in each n is not listed in your book. This would be (starting with 2): 2, 3, 2, 5, 3, 7, 2, 3, 5, 11, 3, 13, 7, 5, 2, 17, 3, 19, 5, 7, 11, 23, 3, 5, 13, 3, 7, 29, 5, 31, 2, 11, 17, 7, 3, 37, 19, 13, 5, 41, 7, 43, 11, 5, 23, 47, 3, 7, 5, 17, 13, 53, 3, 11, 7, 19, 29, 59, 5, 61, 31, 7, 2, 13, 11, 67 ← (41, 7, 43, ...)

4) Sequence A2387 1385 is 1, 4, 11, 31, ... and is related to harmonic series. The corresponding sequence 1, 3, 10, 30, ... (terms smaller by 1 unit) is not in your book. See Boas and Wrench, Am. Math. Mo. 78 864-870 (1971). A115515

Last year I bought another computer (an Apple II) and I am in the process of programming it for computations similar to the work I do on my Wang, but much faster. It will work up to about 600S (I'll seldom need that) and will operate directly in machine language. I've had to learn from scratch, and I still have a lot of work ahead of me. For instance, I haven't decided how best to find the logarithm or exponential, divide one number by another, etc. Someday it should be done. In the meantime the Wang keeps going like a faithful workhorse.

Best regards,

Herman

P.S. Bell numbers can be obtained from $B(n) = e^{-1}\sum_{k=1}^{\infty} \frac{k^n}{k!}$ n=1, 2, 3, ...
A related sequence is obtained from $S(n) = e\sum_{k=1}^{\infty}(-1)^{k+1}\frac{k^n}{k!}$:

1, 0, −1, −1, 2, 9, 9, −50, −267, −413, 2180, 17731, 50533, −110176, ...

This is Seq. 755

A6530

Scan

add to several

Robinson letter

Oct 8 1981

One page