

The 88 Extension of Sequence Encyclopedias - Solution

Note: This puzzle will give you the location you will need to go to during Thursday's lunch.

The title, as always, is really helpful. The first result from a Google search of "Sequence encyclopedias" brings a link to a site called the OEIS (The Online Encyclopedia of Integer Sequences). In each line provided, the first number is the six digit index of an integer sequence and the second number is the index of a desired number in the sequence. For example, sequence #000668 is the Mersenne primes, and the third number in the sequence is 31. Repeating the process for each sequence, we get the following numbers:

31 - 000668 3 (Mersenne primes)
6 - 000396 1 (Perfect numbers)
87 - 003273 44 (Congruent numbers)
96 - 001563 5 (Numbers of the form $[n+1]! - n!$)
84 - 000292 8 (Tetrahedral numbers)
72 - 001175 27 (Pisano numbers)
27 - 000578 4 (Cubes)
42 - 000108 6 (Catalan numbers)
70 - 000984 5 (Central binomial coefficients)
70 - 000129 7 (Pell numbers)
21 - 000045 9 (Fibonacci sequence)
71 - 006567 5 (Emirps)
57 - 002061 9 (Central polygonal numbers)
56 - 000041 12 (Partition numbers)
91 - 003215 6 (Hex numbers)
90 - 050683 4 (Number of Palindromes)

Sidenote: Each of the sequences above are extremely important in various branches of math and science.

Now, we look at the other part of the title - 88 extension. If we add an "88" to the beginning of each number we found in the previous step, we get a sequence of four digit numbers. Each of these numbers are extension numbers for various teachers on campus. For example, 8831 is the extension number for Mr. Barcellos. Writing down the last names of the teachers that correspond to each extension number, we get:

8831 - Barcellos
8806 - Autran
8887 - Schmidt
8896 - Kolbeck
8884 - Evard
8872 - Tait
8827 - Brashears

8842 - Abarca
8870 - Lerner
8870 - Lerner
8821 - Cler
8871 - Onodera
8857 - Utter
8856 - Recktenwald
8891 - Trevarthen
8890 - Stark

Take the first letters of each of the names to get **BASKETBALL COURTS**, so our location is the outdoor basketball courts by the D building.