

## Re: Erin Marie Sorenson – August 5th 1985

**Source:** <http://coding.derkeiler.com/Archive/General/comp.programming/2003-10/1703.html>

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**From:** Sefton (*111\_at\_111.ii*)

**Date:** 10/27/03

Date: Mon, 27 Oct 2003 13:31:05 -0500

On Mon, 27 Oct 2003 17:56:57 GMT, "Marcia and Me"  
<Marciaandme@hotmail.com> wrote:

>Friday April 12th 2002 102/263 16490

>

>*S O R E N S O N*

>19 15 18 5 14 19 15 14 = 119

>

> *Oh dear. Nubile sweetie Erin Sorenson lost control of her little Honda*

>*Civic on April 10th and swerved into the path of a big Buick Lesabre. <snip>*

>211 Erin 5 8 85 217/148 10396

>Erin 46 Marie 46 Sorenson 119

>

>*Primes*

> 2 73 179 283

> 3 79 181 293

> 5 83 191 307

> 7 89 193 311

> 11 97 197 313

> 13 101 199 317 <-66th

The math is rather simple and not the torturing brain buster you are making it out to be.

"It's as if the characters had to puzzle their way out of a big cube by determining which code words were nouns \*and\* verbs, and spent the whole movie sweating and screaming grabbing their foreheads in exhaustion as they tried to figure out 'right' or 'judge'."—Robert Lee

"The central mathematical puzzles are absurd. The math major chick sweats and grunts to figure out if numbers ending in 5 and even numbers, for instance, are prime. (Prime numbers being those divisible only by themselves and one, for those not keeping track of such things since high school.) Uh...duh, they're not. Anything ending in 5 is divisible by 5, and no even number can be prime.

The "puzzle" only gets more absurd when she figures out that it's not prime numbers that denote "trapped" rooms, it's powers of primes (prime numbers multiplied by themselves a certain number of times). All of a sudden she's \*really\* grabbing her temples and sweating, she gives a completely erroneous lecture to her fellow survivors on how impossible it is to figure this shit out, and then the autistic character turns out to have the very lucky gift of mathematical genius, and the plot proceeds from there.

Small problem: all the code numbers in the film are three digits. There are only nine powers of prime with three digits or less that take any real work to figure out, and anybody who could deduce prime from three-digit numbers could get those, too—if, that is, she hadn't already memorized them as part of her studies. (The others are factors of 2, 3 and 5, and while there are a bunch of them, they're all easy as pie to figure out.)\*

all the numbers were three digits, which caps your primes base at 31, which limits the total available code numbers to designate "trap rooms" in the Cube to....(drumroll)...twelve.

The hilarious thing is that the first assumed solution in the movie—figuring out whether any number between 000 and 999 was prime or not—would likely have been the slightly tougher and more time-consuming task.

Brief explanation, again, for anyone who cares:

$31 \times 31$  is 961. The next highest prime number\* is 37, which squared is 1369. Since all the room numbers in Cube are three digits, and the roots have to be prime, no root number greater than 31 is possible.

Which in turn means that the only square powers of prime available are:

001 (1X1)  
004 (2X2)  
009 (3X3)  
025 (5x5)  
049 (7x7)  
121 (11x11)  
169 (13x13)  
289 (17x17)  
361 (19x19)  
529 (23x23)  
841 (29x29)  
961 (31x31)

Only the last five or six should be hard to keep straight in the head of anybody with a fourth grade education or higher—the rest are all basic times tables info we all memorized. Even if the Hardcore Math

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Student Girl hadn't memorized all the higher powers of prime under 1000 in the course of her studies, she could simply have figured them out once, memorized two, and assigned two other able-minded character to memorize two each.

Voila. No NSA computers, idiot savants or big, sweaty arguments necessary.

\*For those who really didn't pay attention in grade school, prime numbers are those which can only be divided by one and themselves."  
– Robert Lee

Sefton

"You just nailed me in the head!" – Travis Bogumill  
<http://www.exn.ca/Stories/1998/08/04/51.asp>