MYSTERY HUNT 1984
RULES

IMPORTANT NOTICE: Due to an administrative screw-up on my part, the $50.00 prize that was mentioned in the IAP guide unfortunately does not exist. The winner (or winning team) does get to keep the coin, though. Depending on the size of your team, I may be able to take you to Toscanini's or something.

1) The object of the game is to find an unusually coin that has been cleverly hidden somewhere on campus. Whoever finds it first will be declared the winner.

2) The way this is supposed to be done is by solving the puzzle on the "Official Mystery Hunt 1984 Clue Sheet." By properly solving the puzzle (and then being shrewd and clever), you should be led to the location of the coin.

3) The mystery hunt is open to all members of the MIT community. Contestants may work individually or in teams. It is sort of recommended that you work in teams, though, since finding the coin should be fairly difficult, and individuals are likely to get frustrated or left in the dust of those who are working in teams.

4) The clues and hiding place have been chosen such that nothing illegal, immoral, fattening, dangerous, sleazy, or nasty will be necessary in order to find the coin. In fact, I have tried to organize it so that no questionable actions will even be helpful.

5) Bear in mind that the other mystery hunters are doing this for fun, just like you, so don't do anything to hinder anybody else. Spend your time working on the puzzle, and be a good sport.

6) If the mystery hunt isn't solved by 9:00 AM on Tuesday, an additional clue sheet will be made available, which will make things a bit easier. Similarly, another clue sheet will come each morning until the coin is found. (Don't be intimidated by this, I don't anticipate that it will take more than a day and a half or so for the coin to be found).

7) All information, updates, etc. relating to the mystery hunt will be posted on the wall outside my office, MIT room 35-205.

8) Feel free to contact me if anything on the clue sheet is unclear, if you have any questions about the rules, or just to let me know how you are doing. It's a good idea to let me know what kind of progress you are making, so that I can make appropriate additional clue sheets. For example, if it looks like nobody is figuring out a particular clue, I may decide to make it easier, but if at least one team has it figured out, I won't spoil their success by giving away the answer. I'm currently working on my thesis, so I should be in most of the time in 35-205. My phone number is x3-6170 (253-6170), or if you can't find me, you can leave a message on the answering machine at 494-3988, which should get to me within an hour or two (unless I'm asleep).

9) If you should be so skillful as to actually find the coin, be sure to let me know as soon as possible. When correctly describe the coin I will declare you the winner.

10) The official judge, arbiter, and umpire is Jean-Joseph Coté, and all of his decisions will be final.

Good luck,
Jean-Joseph Coté
Part 1: Find $x$ ... (then what?)

$$x = \frac{A \left( C + \sqrt{D} \right) - \left[ E (F^2 + G) + H \right]}{(J + K) L + M}$$

where

$A$ = This is a 74S_____

$B$ = Last 4 digits of the 6 digit Institute id number of the fire extinguisher located in room 12-347. (Hint: the first two digits are "75").

$C$ = Number of ponies in a split.

$D$ = Cruising speed of the Jefferson Airplane (in m.p.h.).

$E$ = Number of ridges on the edge of a 1983 U.S. quarter.

$F$ = Answer to Life, the Universe, and Everything plus the number of eggs in a dozen.

$G$ = In the January 1984 issue of Discover magazine, there is a reference to "gigantic thermonuclear explosions resulting from gas falling onto the surface of a neutron star". Find the page that this is on, type that number into a calculator, and look at the result upside-down.

$H$ =

$$\left( \begin{array}{c} \ 0 \ -\ 3 \end{array} \right) + \left( \begin{array}{c} \ 3 \ -\ 0 \end{array} \right) + \left( \begin{array}{c} \ 0 \ -\ 2 \end{array} \right)$$

$J$ = Population of Enfield, MA on October 11, 1981.

$K$ = Percent of radiolarians whose surfaces are covered exclusively with hexagons.

$L$ = Last three digits of the Library of Congress number of the book that was checked out from the MIT library system fifth-to-most often in 1977.

$M$ = $a/b$ ratio of $\gamma$-Caprolactam-5-methylresorcinol (form I)

Helpful hint: Everything on this page is an integer.
Part 2: Fill in the blanks

(1) _______ (2) _______ (3) _______ (4) _______ (5) _______ (6),
    _______ (7) _______ (8) _______ (9).

(1) This is a simple substitution cipher:
    rrfdcmogatovqchomorcdchmcgallazahmnjchmoavnchjrtdmotrrmjefmdchmomdaghmc
    mocadmjmotdrcfmmhth1ltrrarchmontxchhlmth1ltrrmarchedghmodchochdhtvaovtzhotchth
    nthtrjtcmformgnocfamjmdnovtjztczd

(2) Length in meters of the cable supporting the nearest Engman sculpture.

(3)

    I
    -----------------------------
    WOODWORTH
    EASTMAN

    II
    -----------------------------
    MALCOLM
    HENRY

(4) Fill in the blank:

    "Ἀνδρῶν ἐνί αὐνόν πάσα γνή καγόσ»

(5) 3D character

(6) Latitude of Protei Regio

(7) A gage for determining the thickness of glass or a strip of leather cut from a butt or hide.

(8) "A dozen day-old Bavarians, two Skors, a nectar, a bagel and butter, and a Charleston Chew ....student."

(9) Niagara.