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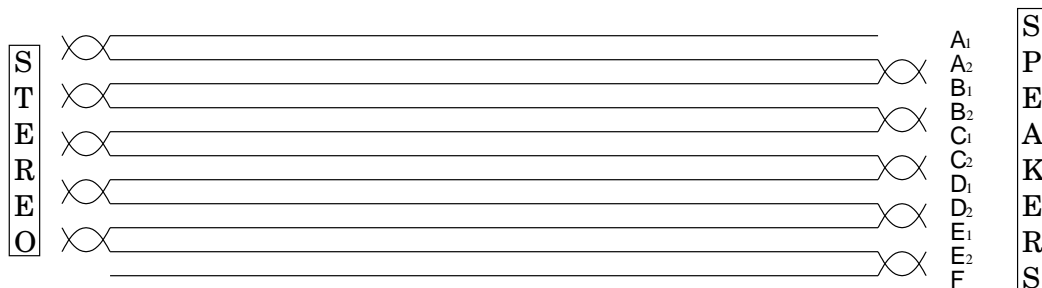
MATH CLUB TEASER #17

March 27, 2009
(due April 3, 2009)

SOLUTION

- 1) At one end (say near the stereo) join the cables in pairs by twisting their tips together. One cable tip will remain unpaired.
- 2) Near the speakers at the other end, use the tester to find which cables are paired. Label a pair A_1, A_2 , the next pair B_1, B_2 , the next C_1, C_2 , etc. One cable tip will remain unpaired; label it F .
- 3) Now twist together the following pairs of cable tips:

$(A_2, B_1), (B_2, C_1), (C_2, D_1), (D_2, E_1), (E_2, F).$



- 4) Back near the stereo, untwist the paired tips, but keep track of which ones were paired (perhaps twist them together at the insulated portion). The unpaired tip can be labeled already because it is the other end of cable F .
- 5) Use the continuity tester to see which tip connects to F . This tip can now be labeled E_2 , and its companion can be identified as E_1 .
- 6) Use the continuity tester to see which tip connects to E_1 . This tip is D_2 , and its companion is D_1 . Continuing in this manner, the rest of the tips can be labeled.

SOLVED BY:

No correct solutions were submitted.