

# Cal Poly Department of Mathematics

## Puzzle of the Week

October 14 - 20, 2011

Every day after work Amanda takes the train out to her suburb station where her husband picks her up promptly at 5pm to take her back home. Yesterday, however, she took the early train and arrived at 4pm. As the weather was nice she decided to walk home along the route her husband takes to the station and meet him along the way. Assuming he left just in time to pick her up at 5, and assuming he always travels at a constant speed, if they arrived home 10 minutes earlier than usual at what time did Amanda meet her husband?

*Solutions should be submitted to Morgan Sherman:*

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*before next Friday. Those with correct and complete solutions will have their names listed on the puzzle's web site (see below) as well as in next week's email announcement. Anybody is welcome to make a submission.*

<http://www.calpoly.edu/~sherman1/puzzleoftheweek>

*Solution:* Amanda meets her husband at 4:55pm.

I borrowed this puzzle from Martin Gardner, who places it in his collection "Mathematical Puzzles and Diversions".

This is an example of a puzzle where trying to write down mathematical notation might end up inhibiting the solution. One can simply reason as follows: Since Amanda's husband travels at the same speed to and from the station he must meet her 5 minutes before he was intending, in order for the return trip to also be 5 minutes short and thus arriving at home a full 10 minutes early. So he must meet her 5 minutes before 5pm.

Note that no information regarding distances or exact value of velocities (walking or driving) was needed to find a solution!