

Cal Poly Department of Mathematics

Puzzle of the Week

Oct 11 - Oct 17 24, 2012

From Kyle Griffin:

Alex announces to mathematicians Paula and Sam that he will secretly pick two distinct integers x and y with $2 \leq x < y \leq 100$. Alex then privately tells Paula the value xy and also privately tells Sam the value $x + y$ (Paula and Sam each know Alex has told the other this information). Afterwards Paula and Sam have the following conversation:

Paula: I wish I knew the two numbers, but I don't.

Sam: Well, I knew that you didn't know the two numbers.

Paula: Aha! Now I know both numbers!

Sam: Yes, now I do too!

What are x and y ?

Solutions should be submitted to Morgan Sherman:

Dept. of Mathematics, Cal Poly

Email: sherman1 -AT- calpoly.edu

Office: bldg 25 room 310

before next Tuesday. 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>