

THE MATHEMATICS DEPARTMENT PRESENTS

# The Problem of the Week

A contest for WSU Undergraduates...  
but challenging for anyone!

## The Rules

- Each Tuesday, starting in the third week of the fall and winter semesters, The Problem of the Week will appear in The South End as well as being posted near the Math Department office (1150 FAB).
- Contestants are broken up into two categories: Group A-those students who have not completed MAT 2030 and Group B-those students who have completed MAT 2030.
- Students must submit their written (not electronic) solutions to the Math Department (1150 FAB) by noon of the following Tuesday.
- In each category, all correct solutions will equally divide 100 points. For example, if 4 people in Group A submit correct solutions, each student will earn 25 points.
- After 10 weeks, the top three students in each category are declared the winners!

## Sample Problem

Armenian Mike and Bubba have 8 quarts of wine, which is in an 8-quart container. They have an empty 5-quart jar and an empty 3-quart jar. Assuming the container and the jars hold exactly the amount specified, and the men have no other means of measuring, how can they divide the wine equally?

## Solution

The steps required are demonstrated in the following table

Step	8-Q	5-Q	3-Q
Start	8	0	0
1	3	5	0
2	3	2	3
3	6	2	0
4	6	0	2
5	1	5	2
6	1	4	3
7	4	4	0

## The Rewards

- In each category, prizes of \$50, \$20, and \$10 are awarded for the students in 1<sup>st</sup>, 2<sup>nd</sup>, and 3<sup>rd</sup> places, respectively.
- Winners will be invited to attend the Mathematics Department's Annual Award Ceremony held in April.
- You get to have fun with mathematics!