Michigan Math Circle
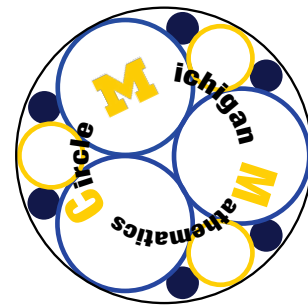
Listed in counterclockwise order, a pentagon has vertices (1,1), (5,3), (4,6), (0,4), and (-3,5). The area of the pentagon is given by the formula ½(3 + 30 + 16 + 0 - 3) – ½(5 + 12 + 0 – 12 + 5). Why? Does this formula generalize?

Who: High school students who *eat and breathe* mathematics. If you find the problems at the top and bottom of this flyer interesting, then you should seriously consider attending.

What: Math Circle is a weekly meeting of students who enjoy mathematics and want the added challenge of learning exciting topics outside of the standard curriculum.

When: Thursday evenings from 6:30 to 8PM beginning September 21.

Where: The second floor atrium of the Mathematics (south) side of East Hall (530 Church Street, Ann Arbor).

How: For registration information, please visit the Michigan Math Circle web page www.math.lsa.umich.edu/mathcircle

Consider a row of lockers, numbered 1 through 100. All are initially closed. A student comes along and opens every locker. Then a second student walks by and closes all of the even numbered lockers. Then a third student appears and opens or closes all the lockers whose numbers are divisible by 3. (That is, the student closes the third, opens the sixth, closes the ninth, …) A fourth student then opens or closes all the lockers whose numbers are divisible by 4, and so on. After the 100th student has come by, and opened or closed locker 100, which lockers are left open?

Autumn 2023 Session