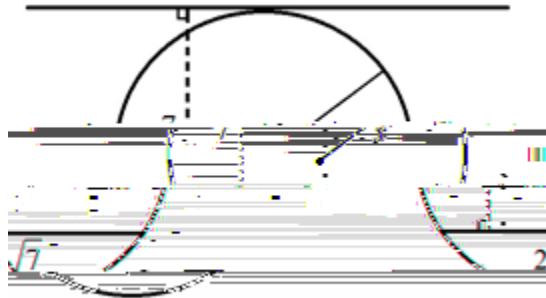


ROUND #1

*University of North Georgia
Mathematics Tournament
April 1, 2017*

Given the figure below, find x , where x is the radius of the circle.



ROUND #2

*University of North Georgia
Mathematics Tournament
April 1, 2017*

Solve the following system of equations. Write your solution as an ordered triplet.

$$\begin{array}{rcccc} \log_2 x & \log_4 y & \log_4 z & & 2 \\ \log_3 & \log_9 & \log_9 & & 2 \\ \log_4 & \log_{16} & \log_{16} & & 2 \end{array}$$

ROUND #4

*University of North Georgia
Mathematics Tournament
April 1, 2017*

Consider the figure:

Suppose that A is the center of the small square, one side of the large square has length 8 units, one side of the small square is 6 units, and $BC = 4$ units. Compute the area of the shaded region

If you need this document in another

ROUND #6

*University of North Georgia
Mathematics Tourna*

If you need this document in another

ROUND #8

*University of North Georgia
Mathematics Tournament
April 1, 2017*

Determine the measure of angle shown in the figure below between the hands of an analog clock at 4:42.





ROUND #10

*University of North Georgia
Mathematics Tournament
April 1, 2017*

A smaller cylinder of radius r rolls without slipping, in the counter clockwise direction, on a larger cylinder of radius R with center O , as shown in the figure below. If $R = 3$ meters and $r = 1$ meter, how many complete rotations does the smaller cylinder undergo as it makes one complete transit around the larger cylinder?

