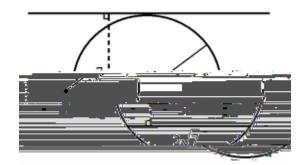
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Given the figure below, find *x*, where *x* is the radius of the circle.



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

$\log_2 x$	$\log_4 y$	$\log_4 z$	2
log <sub>3</sub>	log <sub>9</sub>	log <sub>9</sub>	2
$\log_4$	$\log_{16}$	$\log_{16}$	2

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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

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

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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?