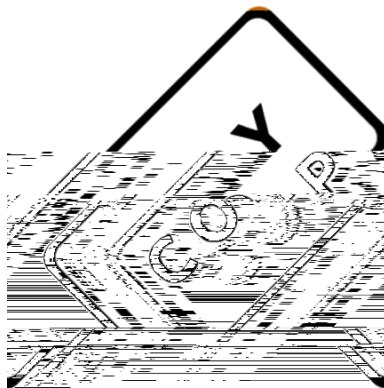


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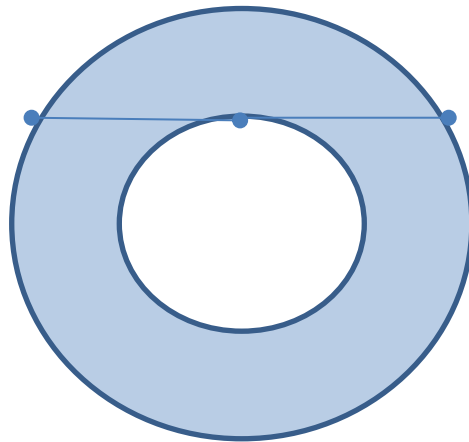
A copying machine can make copies that are 80%, 100%, or 150% as large as the original. By making copies of copies, what is the smallest number of times one must use the machine to obtain a copy that is 324% as large as the original?



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Knowing that the segment shown in the picture is 8 inches long, calculate the shaded ring area between the two circles. Give the result in square inches, approximated to three decimal places.



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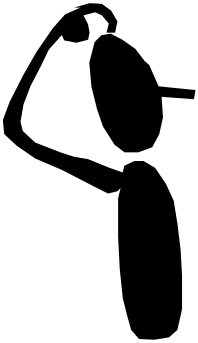
**1**

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If  $a^2 - 5a + 2 = 0$



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Solve the equation and find TWO integer solutions.

$$2 \log_{18x-1} (x^2 - 4x + 3) = \log_{x^2 - 4x + 3} (18x - 1)^2 - x - 7 + 3$$

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Find \_\_\_\_\_ .  
\_\_\_\_\_ .  
\_\_\_\_\_ .

