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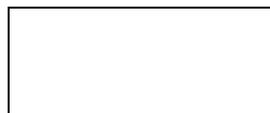
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**Problem 5.** If you have 2 black socks and 3 green socks in a drawer, in the long run, what is the average number of socks you must take out in order to have a matching pair?

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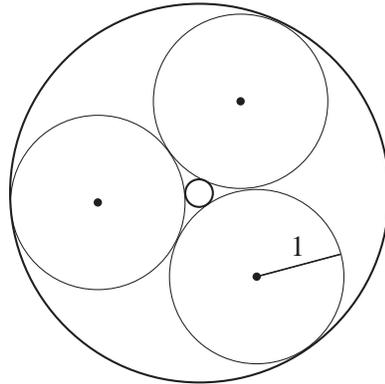
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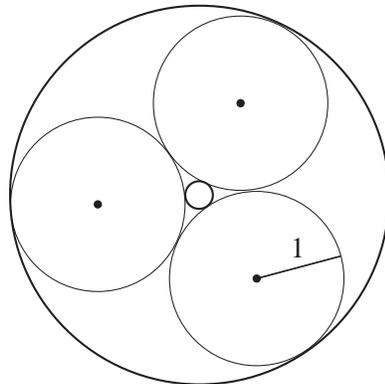
**Problem 7.** What is the sum of all the positive factors of 288 (including 1 and 288)?

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**Problem 8.** The three middle circles in the figure have radius 1. What is the sum of the radii of the smallest and largest circles?



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**Problem 9.** How many integers between 7 and 2007 inclusive are divisible by neither 3 nor 5?

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