Question 1

Seven men enter an elevator on the first floor of an $n$-story building, where $n \geq 10$. How many ways can the men get off on seven consecutive floors (the order they get off is important)? Assume there are no floors below the first, and that no one gets off on the 1st floor.

*Source: WVSMFD Fairmont State University*

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Question 2

Three identical circles are tangent to one another, as well as to an equilateral triangle with sides of length $l$ (see diagram). Find the radius of the circles, in terms of $l$.

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**Instruction:**
To participate, you must be an undergraduate enrolled in at least one course at Marshall University. Write your name, student ID and the date and time of your submission on your work. All work must be original. Drop your solution in the envelop attached to the door of Smith Hall SH 526 or bring it to Dr. Otunuga’s office in WAEC 3229.

The top problem solver from campus will be declared, awarded a certificate at the end of the month.