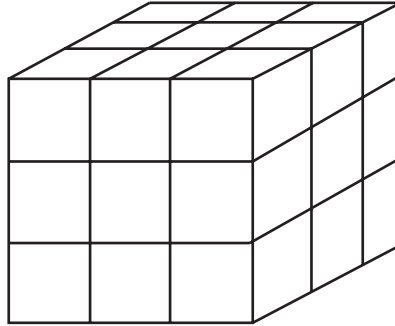


The Paint Fell on the Cube

A large can of red paint fell on this $3 \times 3 \times 3$ cube, and all its surface, including its bottom, got covered with red paint.



1. How many unit cubes have only one face painted red?
2. How many unit cubes have only two faces painted red?
3. How many unit cubes have three faces painted red?
4. How many unit cubes have no faces painted red?

Answers

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The cubes are painted as follows: One face painted red: 6. Two faces painted red: 12. Three faces painted red: 8. No faces painted red: 1.