1116-VW-1093 **C. Berge-Sisneros*** (carissa.berge-sisneros@nsc.edu), Henderson, NV. *Probability of Integer Area Lattice Figures.* Preliminary report.

We prove that lattice triangles have integer area with probability $\frac{5}{8}$. We use this result to show that any lattice polygon has a greater than 50% probability of having integer area. We then show that if a lattice polygon has integer area, the probability that the area is an even number is greater than 50%. After establishing these two-dimensional results, we prove similar results for lattice pyramids in higher dimensions.

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