GALLOP ROUND 5

13. Jim drops a ball from 32 feet off the ground and it bounces back up halfway every time. How many feet will the ball travel before it stops? Answer to the nearest tenth of a foot.

14. Jenna rolls five fair, six-sided dice. Given that there is at least one pair of dice rolls with an odd product, and the probability that the product of the numbers on all five dice is also odd can be represented as $\frac{a}{b}$ and $GCD(a, b) = 1$, what is the value of $a * b$?

15. A regular hexagon is inscribed inside a circle of radius 2, and small circles are constructed externally tangent to the midpoint of each of the hexagon's sides and internally tangent to the large circle. The shaded area shown in the figure can be expressed as $a\pi + b$ where a and b are real numbers. Compute $a + b$.