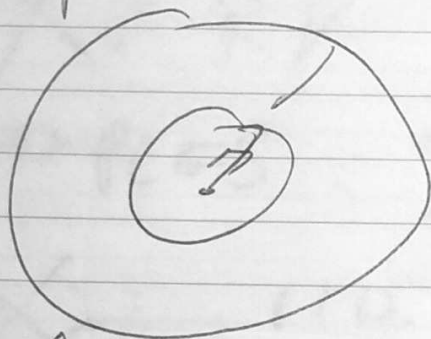


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(a)



$$P(|X| < r) = \begin{cases} r^3 & \text{if } r < 1 \\ 1 & \text{if } r = 1 \end{cases}$$

(b) $P = \text{RATIO OF VOLUMES}$

SPHERE =

CUBE =

(c) $X_1 > 0, X_2 > 0, X_3 > 0$ $P = \frac{1}{8}$

(d) $\frac{1}{2}$

6.2 $t_1 = 0$ $t_2 = \frac{\pi}{2}$ $t_3 = \pi$

$X(t_1) = 0$ $X(t_2) = A$ $X(t_3) = 0$

$P(X_1 = x_1 \& X_2 = x_2 \& X_3 \leq x_3)$