1. No. Since X_i for any $i \geq 1$ is uniformly distributed between -1 and 1, its distribution does not get concentrated on the vicinity of some number.

2. Yes, to 0, since for $\epsilon > 0$,

$$\begin{aligned}\lim_{i\to\infty} \mathbf{P}\left(|Y_i - 0| > \epsilon\right) &= \lim_{i\to\infty} \mathbf{P}\left(\left|\frac{X_i}{i} - 0\right| > \epsilon\right) \\ &= \lim_{i\to\infty} \left[\mathbf{P}\left(X_i > i\epsilon\right) + \mathbf{P}\left(X_i < -i\epsilon\right)\right] = 0.\end{aligned}$$

3. Yes, to 0. For $\epsilon \geq 1$,

$$\lim_{i\to\infty} \mathbf{P}(|Z_i - 0| > \epsilon) = \lim_{i\to\infty} \mathbf{P}(|(X_i)^i| > \epsilon) = \lim_{i\to\infty} 0 = 0,$$

since X_i is uniformly distributed between 1 and -1 and hence $|(X_i)^i| \leq 1$. For $0 < \epsilon < 1$,

$$\begin{aligned}\lim_{i\to\infty} \mathbf{P}\left(|Z_i - 0| > \epsilon\right) &= \lim_{i\to\infty} \mathbf{P}\left(|(X_i)^i - 0| > \epsilon\right) \\ &= \lim_{i\to\infty} \left[\mathbf{P}\left(X_i > \epsilon^{\frac{1}{i}}\right) + \mathbf{P}\left(X_i < -(\epsilon)^{\frac{1}{i}}\right)\right] \\ &= \lim_{i\to\infty} \left[\frac{1}{2}\left(1 - \epsilon^{\frac{1}{i}}\right) + \frac{1}{2}\left(1 - \epsilon^{\frac{1}{i}}\right)\right] \\ &= \lim_{i\to\infty} \left(1 - \sqrt[i]{\epsilon}\right) \\ &= 0.\end{aligned}$$