We are given the following information about a signal $x(t)$:

(1) $x(t)$ is real and odd

(2) $x(t)$ is periodic with period $T_0 = 2$ and has Fourier harmonic function $X[k]$

(3) $X[k] = 0$ for $|k| > 1$

(4) $\frac{1}{2}\int_0^2 |x(t)|^2 dt = 1$

Specify two different signals that satisfy these conditions

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(1) Tells us that $X[k]$ is odd and purely imaginary

(2) Mostly just establishes notation, and $f_0 = \frac{1}{2}$

(3) Tells us that we are at most looking for $X[-1]$, $X[0]$ and $X[1]$, except that (1) tells us that $X[0] = 0$

(4) Tells us that $|X[-1]|^2 + |X[1]|^2 = 1$

but (1) tells us that $X[1] = -X[-1]$ so

$$2|X[1]|^2 = 1 \quad \Rightarrow \quad |X[1]| = \frac{1}{\sqrt{2}}$$

So... we know that $X[1]$ has a magnitude of $\frac{1}{\sqrt{2}}$ and is purely imaginary, so

$$X[1] = \pm j\frac{1}{\sqrt{2}}$$
$$X[-1] = \mp j\frac{1}{\sqrt{2}}$$

and

$$x(t) = \sum_{k=-\infty}^{\infty} X[k] e^{-2\pi k f_F t}$$
$$= \mp j\frac{1}{\sqrt{2}} e^{-j\pi t} \pm j\frac{1}{\sqrt{2}} e^{+j\pi t}$$
$$\boxed{= \pm\sqrt{2}\sin(\pi t)}$$