1. Is $H(z) = \frac{1 - z^{-5}}{1 - z^{-1}}$ FIR or IIR?

2. Are all BIBO stable systems FIR? True/False?

3. Are all FIR systems BIBO stable? True/False?

4. $H(z)$ is a system such that the input
   $x(n) = \cos(0.1n) + \sin(0.23n)$ gives the output $y(n) = 0$. What is true:

   A) $H(z)$ may be an FIR filter of order 2

   B) $H(z)$ may be an FIR filter of order 4

   C) $H(z)$ has to be an IIR filter