EXERCISE 9.6: Double check the fact that the input $x_2[n]$ determined in Example 9-10 produces an output that is zero everywhere by substituting this signal into the difference equation $y[n] = x[n] - 2x[n-1] + 2x[n-2] - x[n-3]$ to show that the complex phasors cancel out for all values of n.

Also show that the filter nulls out signals such as $2\cos(\pi n/3)$, which is the sum of $x_2[n]$ and $x_3[n]$.

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