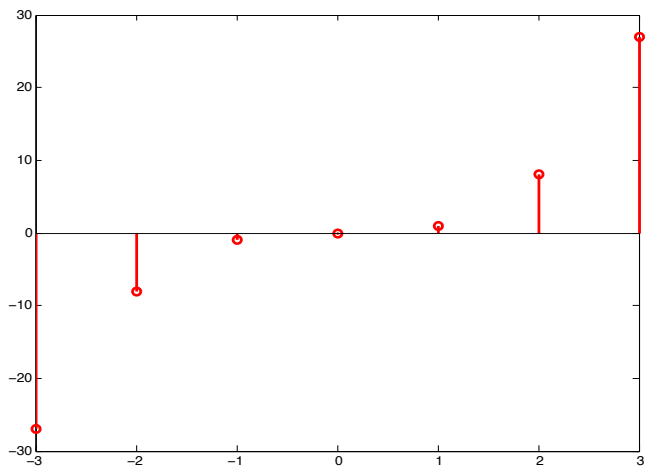$$x(t) = \sin(2\pi t)$$

$$x[n] = n^3 \qquad n \le 3$$
$$x[n] = 0 \text{ otherwise}$$