

1.21. The signals are sketched in Figure S1.21.

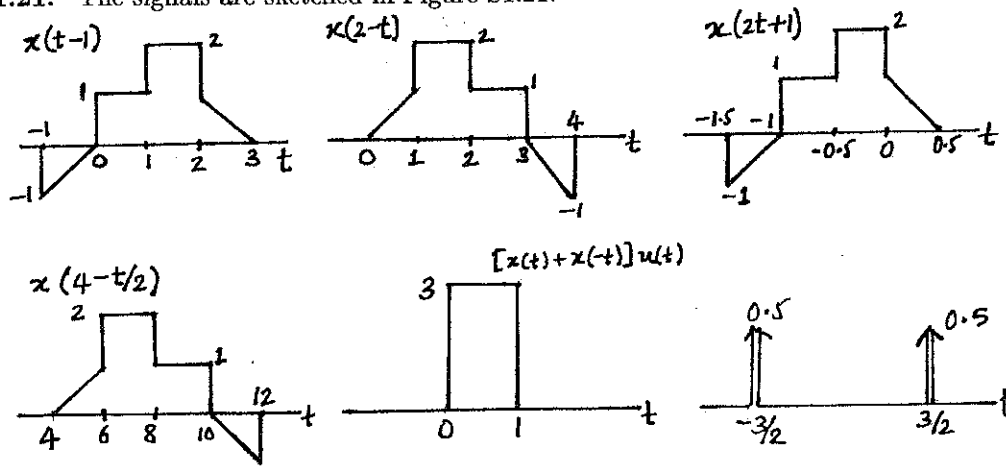


Figure S1.21

1.22. The signals are sketched in Figure S1.22.

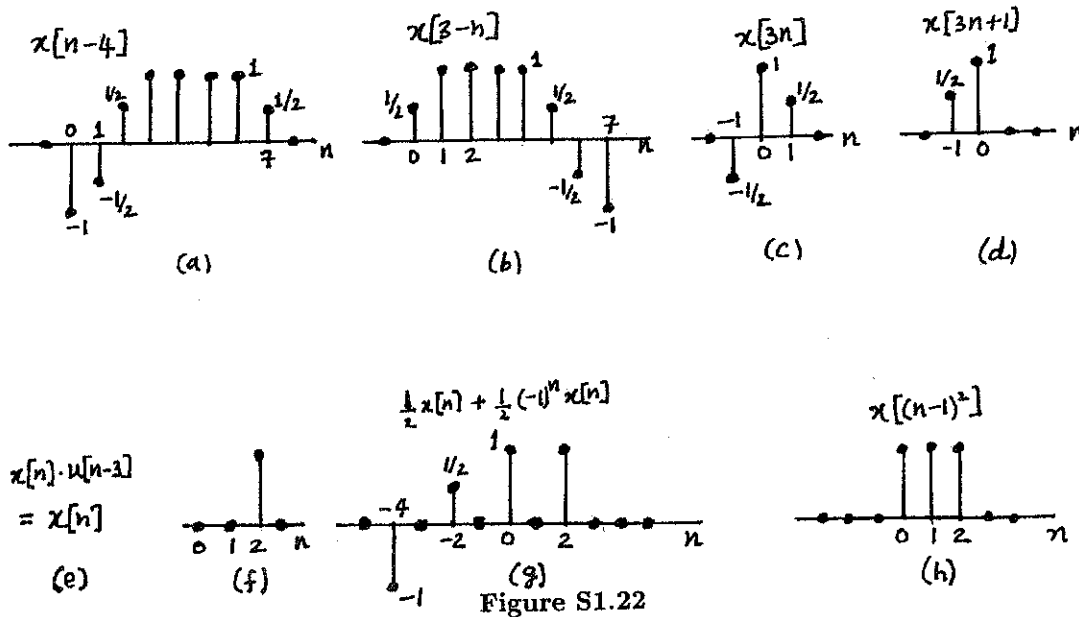


Figure S1.22

- 1.25. (a) Periodic, period = $2\pi/(4) = \pi/2$.
 (b) Periodic, period = $2\pi/(\pi) = 2$.
 (c) $x(t) = [1 + \cos(4t - 2\pi/3)]/2$. Periodic, period = $2\pi/(4) = \pi/2$.
 (d) $x(t) = \cos(4\pi t)/2$. Periodic, period = $2\pi/(4\pi) = 1/2$.
 (e) $x(t) = [\sin(4\pi t)u(t) - \sin(4\pi t)u(-t)]/2$. Not periodic.
 (f) Not periodic.

- 1.26. (a) Periodic, period = 7.
 (b) Not periodic.
 (c) Periodic, period = 8.
 (d) $x[n] = (1/2)[\cos(3\pi n/4) + \cos(\pi n/4)]$. Periodic, period = 8.
 (e) Periodic, period = 16.