1. For each of the following systems, determine whether the system is stable, causal, linear, and time invariant:

(a) $T(x(n)) = (\cos(\pi n))x(n)$

(b) $T(x(n)) = x(n^2)$

(c) $T(x(n)) = x(n)\sum_{k=0}^{\infty}\delta(n-k)$

(d) $T(x(n)) = \sum_{k=n-1}^{\infty}x(k)$

(e) $T(x(n)) = n^3 x(n)$

a	Stable	Causal	Linear	Time-Invariant
b				
c				
d				
d				