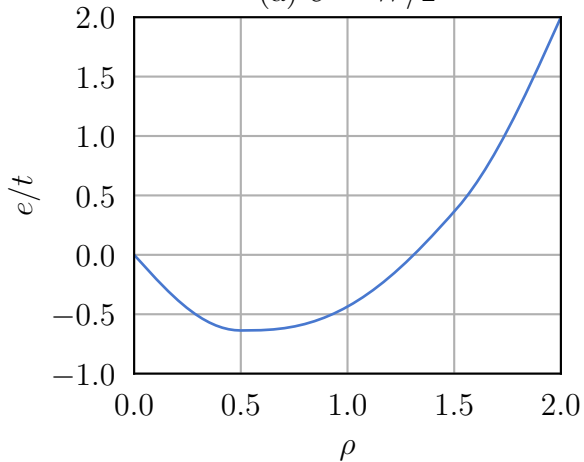(a) $U = W/2$ (b) $U = 2W$