

2(a)	same temperature (as each other)
	no net transfer of thermal energy (between them)
2(b)(i)	$E_1 = XL$
2(b)(ii)	$E_2 = Mc(t - \theta)$
2(b)(iii)	$E_3 = Xc\theta$
2(c)	$E_2 = E_1 + E_3$
	$Mc(t - \theta) = XL + Xc\theta$ and completion of algebra to reach $\theta = (Mct - XL) / c(M + X)$