Strongly correlated Fermi gases (10.0 points)

A. Thermodynamics of a non-interacting quantum gas

A.1 (0.5pt)

$K_x =$

A.2 (0.6pt)

$k_1 =$

A.3 (0.7pt)

$(\Delta k)^3 =$

A.4 (1.4pt)

$\mathscr{E}_F =$

A.5 (0.8pt)

$\mathrm{d}\mathscr{E} =$

$\kappa =$

A.6 (0.8pt)

$\mathrm{d}\mathscr{E} =$

$P =$

A.7 (0.4pt)

$\alpha =$

A.8 (0.6pt)

$\gamma =$

B. Thermodynamics of a trapped quantum gas

B.1 (1.5pt)

Forces:

$A =$

B.2 (0.7pt)

$R_x =$

$R_y =$

$R_z =$

B.3 (1.1pt)

$\mu =$

B.4 (0.9pt)

$\xi =$