(1)

$d_c = \frac{m_c}{V_c}$

$0,6 = \frac{m_c}{2000}$

$m_c = 1200g = 1,2kg$

$P_C = 12N$

$E = d_L \cdot V_c \cdot g$

$E = 1000 \cdot 2000 \cdot 10^{-6} \cdot 10$

$E = 20N$

$T = E - P$

$T = 20 - 12$

$\boxed{T = 8N}$

(2)

a) $p = 0,8 \cdot 10^3 \cdot 10 \cdot 0,6 = 4,8 \cdot 10^3 Pa$

b) $\Delta p = 0,8 \cdot 10^3 \cdot 10 \cdot 0,2 = 1,6 \cdot 10^3 Pa$

(3)

$d_c \cdot V_c = d_L \cdot V_s$

$d_c \cdot 1 = 1 \cdot 0,7$

$d_c = 0,7 g/cm^3$

(4)

$P = 2 \cdot 10 = 20N$

$E = 10^3 \cdot 1000 \cdot 10^{-6} \cdot 10$

$E = 10N$

$T = 20 - 10$

$\boxed{T = 10N}$

(6)

$d_c = \frac{m_c}{V_c}$

$d_c = \frac{6,4}{8}$

$d_c = 0,8 g/cm^3$

$d_c \cdot V_c = d_L \cdot V_s$

$0,8 \cdot 8 = 1 \cdot V_s$

$\boxed{V_s = 6,4 cm^3}$

(7)

$\frac{T_C}{5} = \frac{T_F - 32}{9}$

$\frac{40}{5} = \frac{T_F - 32}{9}$

$T_F = 72 + 32$

$\boxed{T_F = 104°F}$

(5)

$P = 500N$

$P_{ap} = 435N$

$E = P - P_{ap}$

$E = 65N$

a) $E = d_L \cdot V_c \cdot g$

$65 = 10^3 \cdot V_c \cdot 10$

$V_c = 65 \cdot 10^{-4}$

$\boxed{V_c = 6,5 \cdot 10^{-3} m^3}$

b) $d_c = \frac{m_c}{V_c}$ $d_c = \frac{50}{6,5 \cdot 10^{-3}}$

$d_c = 7,7 \cdot 10^3 kg/m^3$

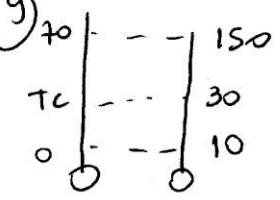
(8)

$\frac{TE - 10}{240} = \frac{50}{100}$

$TE = 120 + 10$

$\boxed{TE = 130°E}$

(9)



$\frac{T_C}{70} = \frac{20}{140_2}$

$\boxed{T_C = 10°C}$

(10)

$\Delta T_C = 10°C$

$\Delta T_F = 1{,}8\,\Delta T_C$

$\boxed{\Delta T_F = 18°F}$

$\Delta T_K = \Delta T_C$

$\boxed{\Delta T_K = 10K}$

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(11)

$\Delta p = 1{,}8 \cdot 10^5 - 1 \cdot 10^5 = 0{,}8\,10^5$

$\Delta p = d g h$

$0{,}8 \cdot 10^5 = 1 \cdot 10^3 \cdot 10 \cdot h$

$h = 8\,m$

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(12)

$d_1 h_1 = d_2 h_2$

$\cancel{800} \cdot \cancel{10} = \cancel{1000} \cdot h_2$

$\boxed{h_2 = 8\,cm}$