

1. D
2. C
- 3.

(a) double cup not so hot (to hold) B1
less heat transfer/sensible comment about air gap/more or better insulation
ignore any explanation involving vacuum B1[2]

(b) starts at (0,80) always above original line and below 80°C, reaches 5 min M1
always descends, straight or concave up, reaches 10 min A1[2]

(c) two points from: B1
reduces/stops (energy losses by) convection B1
reduces/stops (energy losses by) evaporation
reduces/stops (energy losses by) radiation
explanation of mechanism of heat loss (by convection, evaporation or radiation)
explanation plus something like "which reduces heat losses" scores 2/2 on this
part but must do more than restate question [2]