Question:

How many Joules of heat are required to raise the temperature of an 8.0 kg Copper bar by 130 oC? (c-Copper = 0.3851 J/goC)

A. 4.01 × 102 J
B. 4.01 × 103 J
C. 4.01 × 104 J
D. 4.01 × 105 J
E. 4.01 × 106 J

Solution:

Heat:

$Q = cm\Delta t = 0.3851*10^3*8*130 = 4.005*10^5$ [J]

Answer: D. $4.01*10^5$ J