7. What is the total amount of energy in kJ needed to go from 100K to 450K?

Solution

$$\Delta H = MC\Delta T$$

$\Delta T = 450K - 100K = 350K$

$29.1 kJ - 5.72 kJ = 23.38 kJ$

1 mole $\rightarrow$ 23.38

2.1552 $\rightarrow$ $x$

$x = 2.1552 \times 23.38$

$x = 50.4 kJ$