HWU3-9

QUESTION:

If the heat from burning 6.800 g of $C\_{6}H\_{6}$

$$2C\_{6}H\_{y}\left(l\right)+15O\_{2}\left(g\right)\rightarrow 12CO\_{2}\left(g\right)+6H\_{2}O\left(l\right)+6542 kJ$$

is added to 5691 g of water at 21 °C, what is the final temperature of the water?