25. For an Carnot engine, the efficiency is related to the reservoir temperatures by Eq. 21-11. Therefore,

$$T_{\mathrm{H}} = \frac{T_{\mathrm{H}} - T_{\mathrm{L}}}{\varepsilon} = \frac{75\,\mathrm{K}}{0.22} = 341\ \mathrm{K}$$

which is equivalent to 68°C. The temperature of the cold reservoir is $T_{\mathrm{L}} = T_{\mathrm{H}} - 75 = 341\,\mathrm{K} - 75\,\mathrm{K} = 266\,\mathrm{K}$.