



The diagram shows a heat engine operating between two thermal reservoirs. The top reservoir is at temperature $T_H = 400\text{ K}$ and the bottom reservoir is at temperature $T_C = 300\text{ K}$. A curved line represents the engine cycle. An arrow labeled $Q_H = -6000\text{ J}$ points from the top reservoir to the engine. Another arrow labeled $W = 6000\text{ J}$ points from the engine to the right, representing work output.

$$T_H = 400\text{ K}$$

$$Q_H = -6000\text{ J}$$

$$W = 6000\text{ J}$$

$$T_C = 300\text{ K}$$

$\Delta S_H =$
$\Delta S_C = 0\text{ J/K}$
$\Delta S_{NET} =$
Possible?