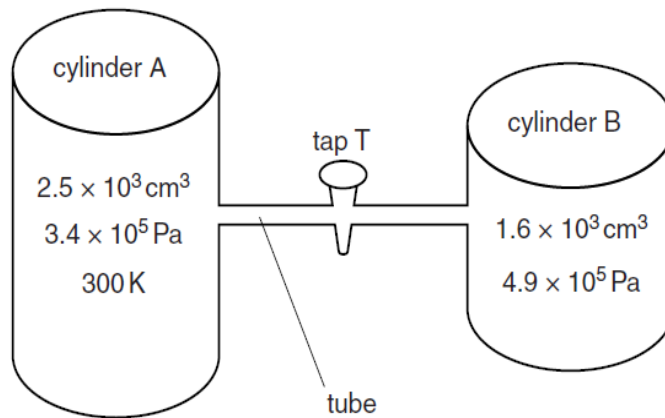


Two thermally insulated cylinders A and B are connected by a tube of negligible volume, as shown.



Initially, tap T is closed and the cylinders contain an ideal gas at different pressures. Cylinder A contains 0.34 mol of gas and cylinder B contains 0.20 mol of gas. When tap T is opened, the pressure of the gas in both cylinders is $3.9 \times 10^5 \text{ Pa}$.

What is the final temperature of the gas?

A

320 K

B

360 K

C

380 K

D

390 K