1. ♥ STUDY CHECK

The value of the equilibrium constant for the reaction

$$C_3H_{8(g)} + 5 O_{2(g)} \rightleftharpoons 4 H_2O_{(g)} + 3 CO_{2(g)}$$

is 500 at a given temperature. An analysis of an equilibrium mixture gave a concentration of water, carbon dioxide and C_3H_8 of 1M. Calculate the equilibrium concentration of oxygen at that temperature.

Show work:

Write just the final answer here:

2. ♥ STUDY CHECK

We prepare mixtures of four chemicals in an experiment. These chemicals are interconnected by the following equilibrium:

$$CO_{(g)} + H_2O_{(g)} \Longrightarrow CO_{2(g)} + H_{2(g)}$$
 $K_c = 0.48$

Indicate if the mixture is in equilibrium. If it is not, indicate whether the reaction will evolve towards the left or the right to reach equilibrium.

Experiment	1
$[CO_2]$	0.0015
$[H_2]$	0.0076
[CO]	0.0094
$[H_2O]$	0.0025

Show work:

Write just the final answer here:

3. ♥ STUDY CHECK

For next endothermic reaction indicate whether the reaction will shift right (\longrightarrow) or left (\longleftarrow) after the following changes:

$$C(g) + O_2(g) \rightleftharpoons CO_2(g) + Heat$$

Write just the final answer here: