

4. (b) :

	$\text{CO}_2$	+	C (graphite)	$\rightleftharpoons$	$2\text{CO}$
Initial	0.5		0		0
pressure (atm)					
At equilibrium	$(0.5 - x)$		-		$2x$
(atm)					

Total pressure at equilibrium = 0.8 atm

$$\text{Thus, } 0.5 - x + 2x = 0.8$$

$$x = 0.3 \text{ atm}$$

$$K_p = \frac{(P_{\text{CO}})^2}{P_{\text{CO}_2}} = \frac{(2 \times 0.3)^2}{0.2} = 1.8 \text{ atm}$$