#3.79, p 119

$$2\,C_4H_{10} + 13\,O_2 \longrightarrow 8\,CO_2 + 10\,H_2O$$

What is the amount (in moles) of carbon dioxide produced from 0.30 mol butane?
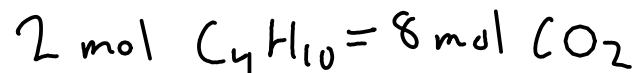
$$2\text{ mol }C_4H_{10} = 8\text{ mol }CO_2$$

$$0.30\text{ mol }C_4H_{10} \times \frac{8\text{ mol }CO_2}{2\text{ mol }C_4H_{10}} = 1.2\text{ mol }CO_2$$