Hydrocarbon Combustion Reactions

Write balanced chemical equations for the following reactions.

1. The burning of propane (C_3H_8) in a barbecue.

$$C_3H_8 + 5O_2 \longrightarrow 3CO_2 + 4H_2O$$

2. The combustion of gasoline (mainly octane C_8H_{18}) by an automobile engine.

$$2C_8H_{18} + 25O_2 \longrightarrow 16CO_2 + 18H_2O$$

3. The combustion of cyclopropane (C_3H_6). This was once used as an anaesthetic.

$$2C_3H_6 + 9O_2 \longrightarrow 6CO_2 + 6H_2O$$