

11 Hydrocarbons and fuels – Part 1

—Answers

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Work through these after trying the questions yourself.

11.1 A compound made of hydrogen and carbon only.

11.2 (a) C_nH_{2n+2} (b) C_nH_{2n} .

11.3 Fractional distillation.

11.4 Cracking breaks large alkane molecules into smaller, more useful ones (a smaller alkane + an alkene). It makes more of the short-chain fuels that are in high demand, and provides alkenes for making plastics.

11.5 Shake each with bromine water: the alkene turns the orange bromine water colourless, while the alkane leaves it orange.

11.6 Propene is C_3H_6 (using C_nH_{2n} with $n = 3$). With bromine water the orange colour turns **colourless** (it is unsaturated).