

## 30 Arenes – Part 1 —Answers

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### Answers

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Work through these after trying the questions yourself.

**30.1** Aromatic hydrocarbons, built on a benzene ring.

**30.2** By electrophilic substitution.

**30.3** Adding a nitro group, using concentrated  $\text{HNO}_3$  and  $\text{H}_2\text{SO}_4$ .

**30.4** Substitution keeps the stable ring.

**30.5** Hydrogen (to give cyclohexane).

**30.6** Cyclohexene has a real, localised  $\text{C}=\text{C}$  double bond that readily adds bromine, removing the orange colour. Benzene's electrons are delocalised into a stable ring, which resists addition —so it does not react with bromine water and the colour stays.