

**38** Butylamine can be produced by the reaction of butanenitrile with hydrogen in the presence of a suitable catalyst.

Which volume of hydrogen, measured at room conditions, is required to react completely with 0.500 g of butanenitrile?

**A** 145 cm<sup>3</sup>

**B** 174 cm<sup>3</sup>

**C** 289 cm<sup>3</sup>

**D** 348 cm<sup>3</sup>