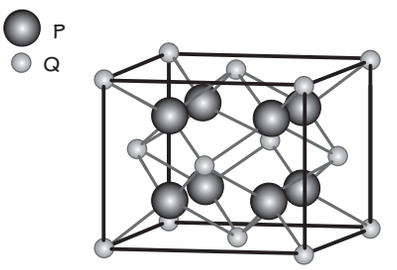
# Types of formulae

**1** The diagram shows the representation of part of a crystal of an ionic compound.




(a) What is the empirical formula of this compound?

Count the number of P and the number of Q ions shown.

☐ A PQ

☐ B $PQ_2$

☐ C $P_2Q$

☐ D $PQ_3$ **(1 mark)**

(b) What is meant by **empirical formula**?

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..... **(2 marks)**

Maths skills

**2** A compound of carbon, hydrogen and oxygen contains 40% carbon and 6.67% hydrogen by mass.

(a) Calculate the empirical formula of the substance.

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..... **(4 marks)**

(b) The relative molecular mass of the compound is 180.
Calculate the molecular formula of the substance.

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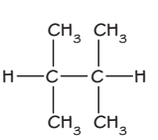
..... **(2 marks)**

(c) State the molecular and the empirical formulae of the molecule shown.




molecular formula …….. empirical formula …….. **(2 marks)**