



0 1 . 2 State the full electron configuration of a cobalt(II) ion.

[1 mark]

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0 1 . 3 Suggest **one** reason why electron pair repulsion theory **cannot** be used to predict the shape of the  $[\text{CoCl}_4]^{2-}$  ion.

[1 mark]

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0 1 . 4 Predict the shape of, and the bond angle in, the complex rhodium ion  $[\text{RhCl}_4]^{2-}$

[2 marks]

Shape \_\_\_\_\_

Bond angle \_\_\_\_\_

**Turn over for the next question**