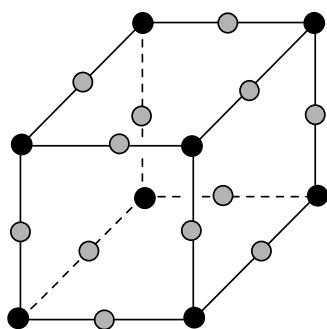


**Marks**  
**5**

- The diagram below shows the structure of an oxide of rhenium. The unit cell is cubic with rhenium at each of the corners and oxygen in the centre of each of the edges.



What is the chemical formula of this oxide?

	Answer:

What are the coordination numbers of rhenium and oxygen in this compound?

Re:	O:
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There is a large hole at the centre of the cell that in some compounds is occupied by a cation. What is the coordination number of a cation occupying this site?

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Given that the density of this oxide is  $7.1 \text{ g cm}^{-3}$ , calculate the length of the cell edge. (The structure is cubic.)

	Answer: