1. Why do they have similar atomic radii?
2. What are transition metals?
3. Why is zinc not considered a transition metal?
4. Why do they all have a number of oxidation states?

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- **What is a coordinate bond?**
- **Examples of complex ions and ligands:**
  - Polydentate ligands
  - Ethylenediaminetetraacetic acid (EDTA)\(^{4-}\)

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- **Transition metals as catalysts**
- **What is a catalyst?**
- **Heterogeneous catalysts**
- **Homogeneous catalysts?**
- Why do industrial processes prefer to use heterogeneous catalysts to homogeneous ones?

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- **When placed in an external magnetic field we use three terms to describe magnetic behaviour:**
  - Diamagnetic: a property of all materials and produces a very weak opposition to an applied magnetic field.
  - Paramagnetic, which only occurs with substances which have unpaired electrons, is stronger than diamagnetism. It produces magnetization proportional to the applied field and in the same direction.
  - Ferrimagnetic is the largest effect, producing magnetization sometimes orders of magnitude greater than the applied field.

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**Christmas homework**

- Pg 35 Q 10-14
- Pg 66 Q 10-16
- Pg 91 Q 7-13
- Pg 327 Q 1-14