**Solving geometric problems**

For more general problems involving vectors, often **drawing a diagram** helps!

[Textbook]  **and are the points , and respectively.**

1. **Find and , giving your answers in the form   
   .**
2. **Show that the lines and are parallel and that .**
3. **Hence describe the quadrilateral .**

[Textbook]  **and are the points and respectively. Find the coordinates of the point so that forms a parallelogram.**

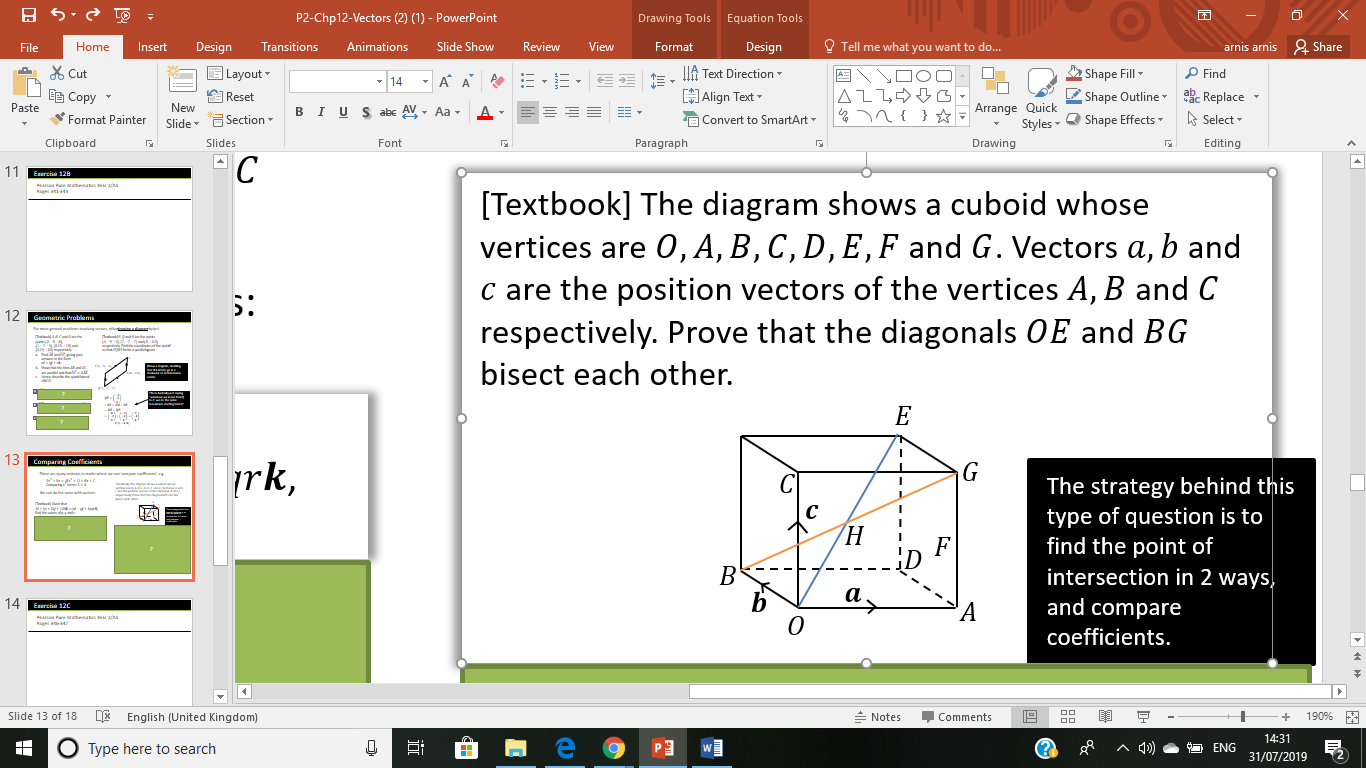
There are many contexts in maths where we can ‘compare coefficients’, e.g.

Comparing terms:

We can do the same with vectors:

[Textbook] **Given that   
, find the values of and .**

[Textbook] **The diagram shows a cuboid whose vertices are and . Vectors and are the position vectors of the vertices and respectively. Prove that the diagonals and bisect each other.**



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The strategy behind this type of question is to find the point of intersection in 2 ways, and compare coefficients.

Ex 12C p.346-347