

11.1.2021

Presented by Bob Chen

### Summary of Points

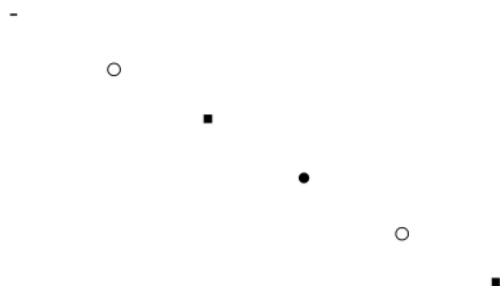
- Mental effort is when you really put thought into how things how
  - o To question why something is true
  - o To question how it fits in with your intuition
  - o Examples:
    - Newton's 3<sup>rd</sup> law
    - Banked tracks vs normal inclined
    - why does adding solids not shift equilibrium?
    - why does temperature change the  $K_{eq}$  when the others don't
- Explain questions are best tackled by using the Why, why, why, why, why method
- Long response questions are best tackled by:
  - o Writing a plan
  - o Considering where marks are coming from
  - o Starting with a definition

Please turn over

## Try these Explain examples!

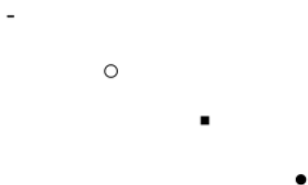
**Physics:** Explain using forces why Kepler's 2<sup>nd</sup> law is true

You should be able to use up all 6 steps until you hit bedrock!



**Chemistry:** Explain why spectra can be used to identify unique elements

You should be able to use up all 4 steps until you hit bedrock!



Please turn over

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## By yourself now!

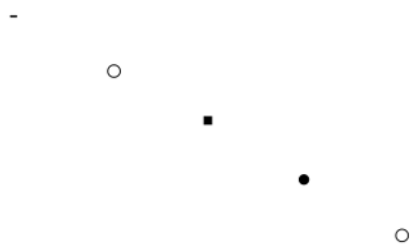
**Physics:** Explain how rockets are able to escape earth's Gravitational field without reaching escape velocity

You should be able to use up all steps until you hit bedrock!



**Chemistry:** Explain how Gibbs free energy can be used to predict spontaneity of reactions

You should be able to use up all steps until you hit bedrock!



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