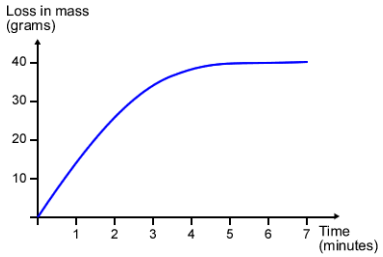
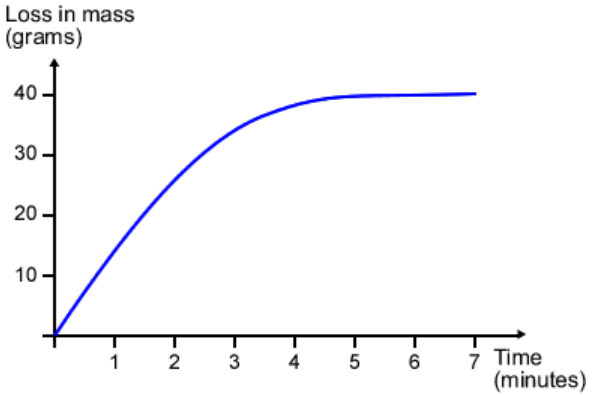
CHEMISTRY REVISION – CHAPTER 6 – RATES & EXTENT OF CHANGE

Give 3 ways to measure the time taken for a chemical reaction

Draw a tangent at t = 2 minutes on the curve below and show how a rate of reaction to be calculated.



Label where the reaction is fastest, slowest and has stopped on the graph below.



<u>Reversible Reactions</u>

What is a reversible reaction?

What is the symbol for a reversible reaction?

If a reversible reaction is exothermic in one direction, what is the energy change in the other direction?

<u>Reversible Reactions</u>

$N_2 + 3H_2 \leftrightharpoons 2NH_3$

The forwards reaction is exothermic.

Explain the effect of increasing the temperature on the amount of ammonia made.

Explain the effect of increasing the pressure on the amount of ammonia made.

CHEMISTRY REVISION – CHAPTER 6 – RATES & EXTENT OF CHANGE

What do we mean by 'rate of reaction'?

What 4 factors affect the rate of a reaction?

What must happen for a reaction to occur?

What is the smallest amount of energy that must be overcome for a reaction to occur?

Give 2 ways the rate of reaction can be calculated.

Explain the effect of concentration on the rate of reaction

Draw diagrams to represent it?

Large concentration | Small concentration

Explain the effect of surface area on the rate of reaction

Draw diagrams to represent it?

Large surface area (lump) | High surface area (powder)

Explain the effect of temperature on the rate of reaction [think about: kinetic energy & number of collisions]

Draw diagrams to represent it:

Low temp | High temp

What is a catalyst? Give 3 points.

Explain how they affect the rate of reaction

Draw the reaction profile below showing the reaction with a catalyst added