11. the demonstration of economic growth using the Production Possibility Frontier (PPF) and Aggregate Production Function (APF)

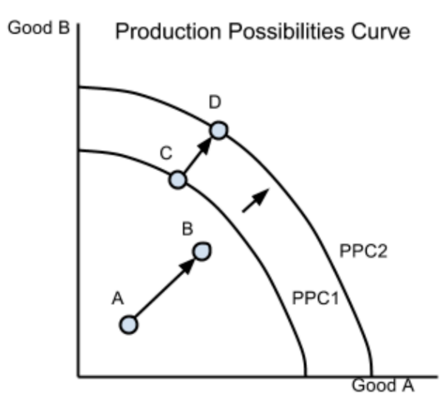
Going to keep this dot point super short and simple, as there are more important diagrams to expand upon, plus the PPC will be mentioned later on.

Production Possibility Frontier (PPF)

Actual growth which takes place when an economy is below full employment level of income and moves towards its potential level of GDP (by employing more of its resources).

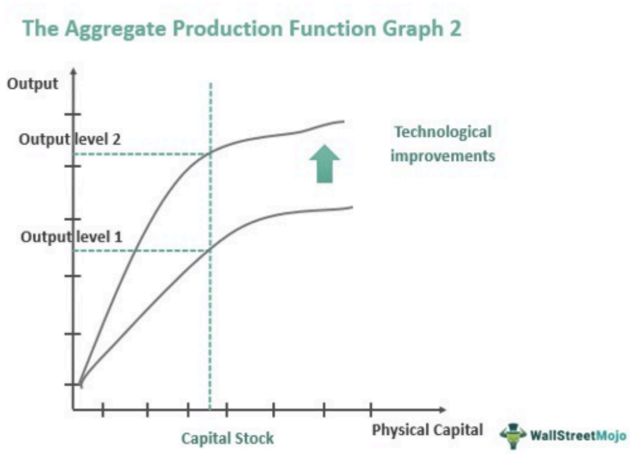
Potential growth occurs in the long-run and it is associated with the increase in quantity and/or quality of factors of production (this shifts the vertical part of the Keynesian AS curve; the vertical LRAS curve in a Monetarist diagram).

Also, see the diagram as you are required to know how to demonstrate economic growth using a PPC (Production Possibilities Curve).



- **A -B is a shift in AD,**
- **C-D is a shift in LRAS.**
- **More on this coming up soon**

Aggregate Production Function (APF)



The aggregate production function (APF) is a concept in macroeconomics that represents the relationship between GDP of an economy and the resources used in the production process (land, labour, capital, enteerprise)

The APF, shows **the law of diminishing marginal returns**. This theory suggests that as an economy continues to increase the quantity of resources, the additional output produced from each additional unit of resources will decrease and eventually start to decline.

The APF has a concave shape. This shape reflects the diminishing marginal returns and highlights how the rate of output growth slows down as more inputs are added to the production process.

To push the APF upwards and increase GDP with the same level of resources, the country needs to improve its **technology** or **productivity.**

Dumbed down explanation of the law of diminishing returns
Let's say you start with a small amount of flour, sugar, and butter. As you add more of these ingredients, you can make more cookies. However, at some point, adding more ingredients doesn't result in as many additional cookies. This is because you have limited oven space or mixing bowls, and the ingredients start to get crowded or used less efficiently.

The law of diminishing output means that as you keep adding more ingredients, the additional cookies you can make from each additional ingredient becomes smaller. It's like when you first started, adding more flour or sugar made a big difference, but as you reach the maximum capacity of your kitchen, the extra ingredients don't add as much to the cookie production.