# Econ 101 | Demo E1

Question 1 | A Favourite Muggle Candy

Sherbet Lemons were one of Dumbledore's favourite muggle foods, which dramatically spiked in popularity after (spoiler!) his death. To ensure the newly popular treat didn't carry unwanted health effects for witches and wizards, the Ministry of Magic's Health and Safety branch decided to keep an eye on their production by allowing only one shop, Weasleys' Wizard Wheezes (WWW), to sell the candy.

As it became clear that the muggle candy didn't need to be regulated, the Ministry began allowing many new candy makers to sell Sherbet Lemons. Each seller had their own individual recipes which allowed anyone to find the recipe and seller they preferred. Today the number of Sherbet Lemon makers has been constant for many years.

Using a graph to illustrate your answer, tell the story of the Weasleys' Wizard Wheezes Sherbet Lemon market as the Health and Safety regulations were lifted. Begin with a graphical description of the market with the regulation, what happened in the short run after the regulation was lifted, and finish in a long run equilibrium.
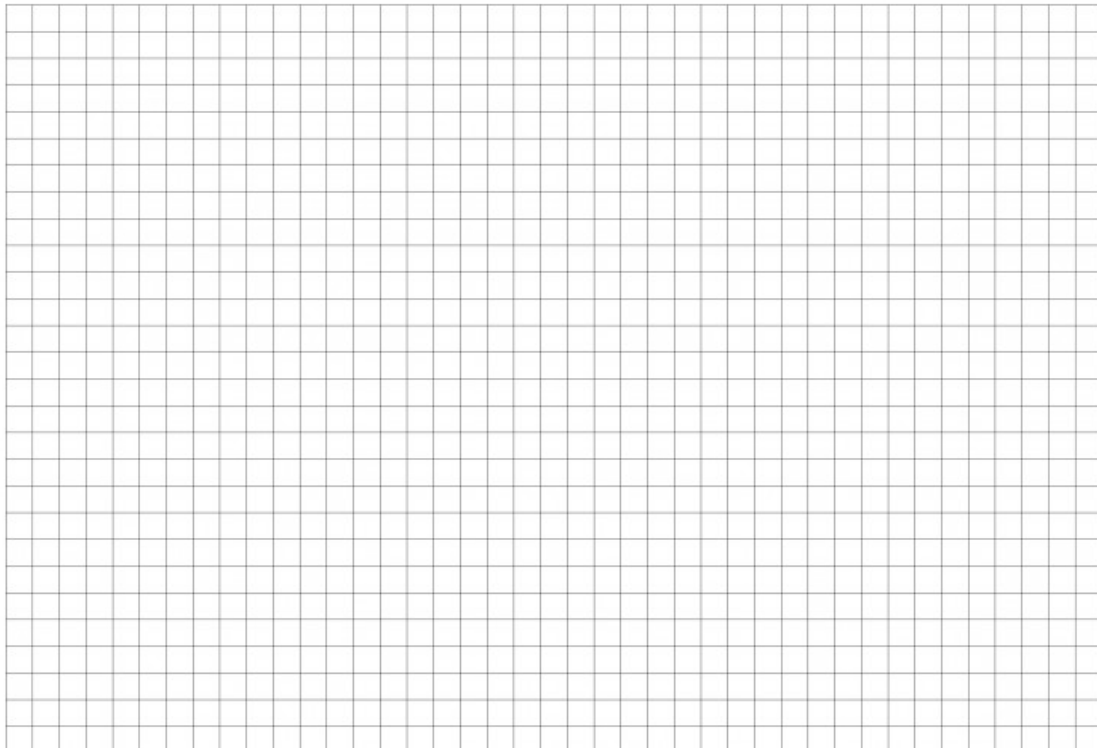
Question 2 | Wizard's Chess

Wizard's Chess is a somewhat common game played by witches and wizards, similar to chess but with self-moving pieces. Due to it's proprietary production process the game can only be obtained at Weasley's Wizard Wheezes through a secretive supplier, X. The demand for Wizard's Chess is given by:

$$P = 10 - 2Q$$

The marginal cost of producing each game is a constant 1 galleon, and there are no fixed costs. The marginal revenue per game is:

$$MR = 10 - 4Q$$

Part A. Quantity

What is the profit maximizing number of games X should sell? Label on the graph above.

Part B. Price

What price should X charge per game? Label on the graph above.

Part C. Profit

What is X's profit from selling the games? Label on the graph above.

Part D. Lumpsum Tax

As TikTok began to capture the attention of the magical world's youth, the Ministry of Magic implemented a 1 galleon subsidy on Wizard's Chess in an attempt to encourage more cognitively challenging pastimes. Use a graph to show the affect this subsidy had on the market.