1. **20 points**. Use ***an aggregate demand (AD) and aggregate supply (AS) model*** (short run model) to analyze this problem. Do not use a different model. Use AD & AS.

**NOTE: this may be fastest with a hand-drawn graph. One option is to draw and scan, while another option is to draw, take a photo and insert the photo to your document. Feel free to use other approaches too.**

1. Represent an initial equilibrium price and output level with the economy operating at or near full capacity (Hint: think about the shape of the AS curve and what this means for **where** AD crosses along the AS curve).

Label the following: each axis, the AD curve, the AS curve, the equilibrium output level and the equilibrium price level.

1. Suppose there is a tax cut, *holding constant* government purchases and all other factors affecting the AD curve. Illustrate the short run effects on output and the price level and LABEL them.
2. Give a 2 -4 sentence explanation and include why the initial state of the economy matters in your explanation.
3. **15 points.** Suppose, ceteris paribus, government purchases decreased by $4 billion, investment spending increased by $40 billion.
4. EXPLAIN (no calculation yet). Would total output increase or decrease? What is the multiplier effect and how does it influence the answer to the question.
5. SOLVE. If 70% of a change in income is spent on new goods and services, what is the anticipated change in total output? Use the formula for the multiplier effect to calculate the change in total output.
6. **10 points**. Evaluate the following as true or false and explain:

*A five percent sales tax on food is an example of a flat tax.*

1. **10 points.** How does the article “Meltdown Averted, Bernanke Struggled to Stoke Growth- Fed Chairman Fails to Engineer Robust Recovery, Even with Extraordinary Measures”” illustrate the Federal Reserve’s dual mandate, monetary policy, and monetary policy tools? Use your notes and book to describe the purpose of the Fed and the article for examples. Answer in a 5-8 sentence paragraph.