4. (30 points) Suppose an economy is in its long-run equilibrium where potential output is equal to $8,000. A stock market crash decreased households’ wealth causing a $2,000 drop in real GDP. In this economy the marginal propensity to consume is 0.8.

a. Use AD, SRAS, and LRAS supply curves to explain the process by which this event will move the economy from one long run economic equilibrium to another. In each case, what are the short-run and long-run effects on the aggregate price level and aggregate output? Be sure to explain the role of wage “stickiness” in the adjustment process.

b. To close the gap government increased its spending on infrastructure projects. By how much government should increase G to close this recessionary gap?

$$
\Delta Y = \frac{1}{1-MPC} \times \Delta G.
$$

$$
\Rightarrow \Delta G = \frac{-2000}{1-0.8} = 4000
$$

(c) Suppose that the chosen expansionary fiscal policy is a tax cut. By how much taxes should decrease to close this recessionary gap?

$$
\Delta Y = \frac{MPC}{1-MPC} \times \Delta T.
$$

$$
\Rightarrow \Delta T = \frac{-2000}{1-0.8} = 5000
$$