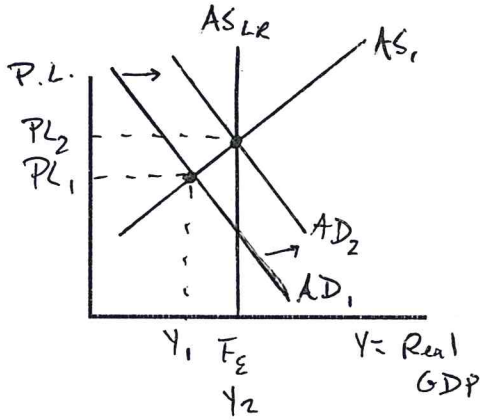
Name: _____ Period: _____ Date: _____

AP Macroeconomics – Changes in Aggregate Demand and Aggregate Supply

Directions: Graph the following scenarios, identify what causes the change, and specify what happens to price level, Real GDP, and unemployment. (Do not assume any other changes – ceteris paribus)

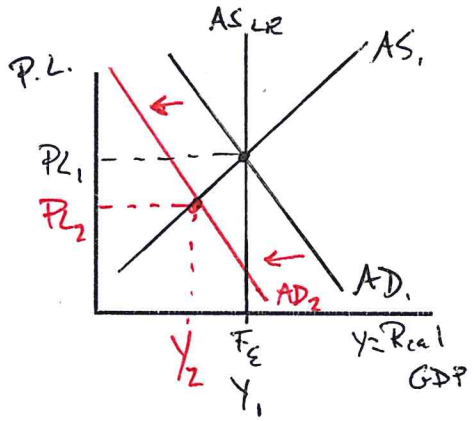
PL = Price Level Y = Real GDP U = unemployment Y_F = full employm

1. The economy is currently in recession. European wage rates increase by 15%.



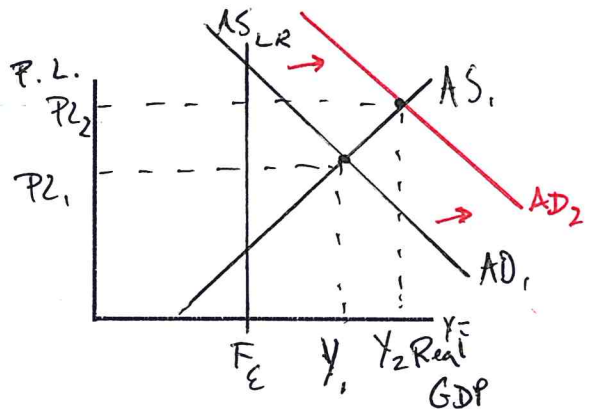
Det: X_n ↑ - foreign income rises
AD: ↑
PL: ↑
Y: ↑
U: ↓

2. The economy is currently at full employment. The government increases personal income taxes by $200 billion.



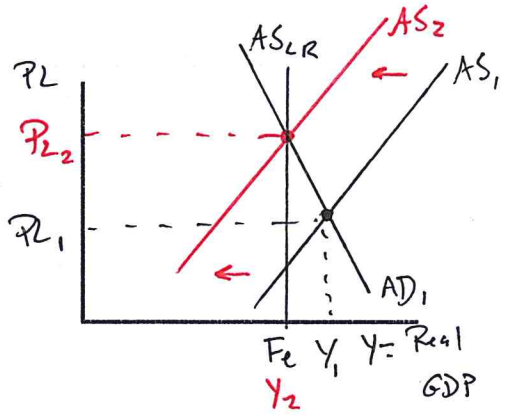
Det: Fiscal Policy ↑T
AD: ↓
PL: ↓
Y: ↓
U: ↑

3. The economy is currently at macroeconomic equilibrium above full employment. Japan experiences high rates of inflation.



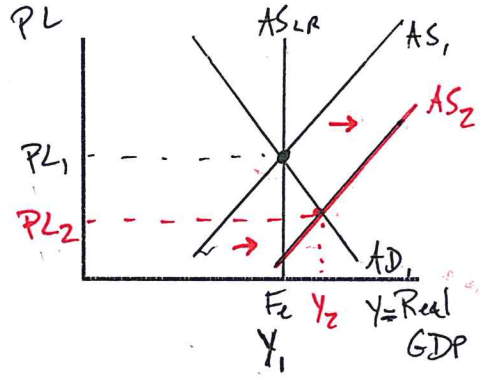
Det: X_n ↑ - exchange rate fal (dollar worth less)
AD: ↑
PL: ↑
Y: ↑
U: ↓

4. The economy is currently operating beyond potential GDP. Congress initiates legislation that increases minimum wage by 10%.



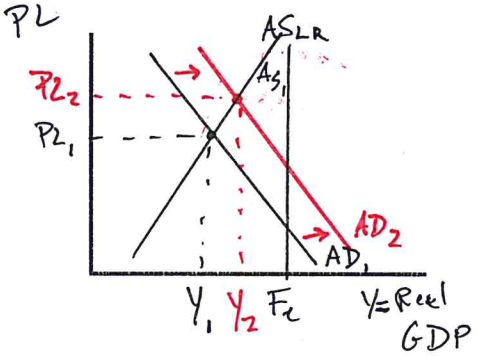
Det: Cost of Inputs - wages ↑
AS: ↓
PL: ↑
Y: ↓
U: ↑

5. The economy is currently at macroeconomic equilibrium at potential GDP. A new technology increases production by 20%.



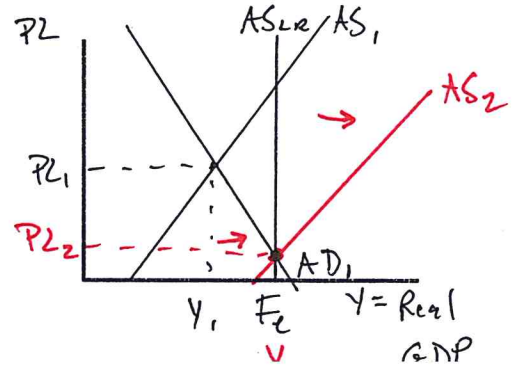
Det: Technology
AS: ↑
PL: ↓
Y: ↑
U: ↓

6. The economy is currently below full employment output. The government increases taxes by $200 billion and investment in infrastructure by $200 billion.



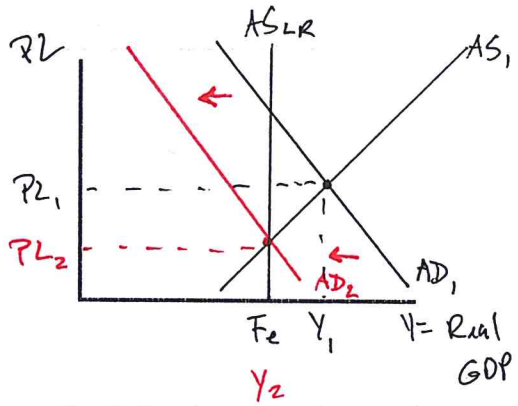
Det: Fiscal Policy - balanced budget multiplier
AD: ↑
PL: ↑
Y: ↑
U: ↓

7. Economy is experiencing high rates of unemployment. An alternative energy source is discovered.



Det: Technology or Cost of Inp
AS: ↑
PL: ↓
Y: ↑
U: ↓

8. The economy is currently experiencing an inflationary gap. The exchange rate for the US dollar increases dramatically.



Dot: X_n ↓ - exchange rate ↑

AD: ↓

PL: ↓

Y: ↓

U: ↑

Directions: Answer the following questions utilizing the given information to determine the multiplier and change in real GDP.

1. The MPC is .75. Government increases spending by $100 million.

multiplier = $\frac{1}{1-MPC}$

$= \frac{1}{1-.75} = 4$

$\Delta GDP = \Delta G * multiplier$

$400 = 100 \times 4$

2. The MPS is .2. Income taxes are increased by $500 million.

multiplier = $\frac{1}{MPS}$

$= \frac{1}{.2} = 5$

$MPC + MPS = 1$

$x + .2 = 1$

$MPC = x = .8$

$\Delta GDP = (\Delta T \times MPC) \times multiplier$

$= (500 \times .8) \times 5$

$= 400 \times 5$

$= \downarrow \$2{,}000$ million $= \downarrow \$2$ billion

3. The MPC is .9. Businesses increase investment by $200 million.

multiplier = $\frac{1}{1-MPC}$

$= \frac{1}{1-.9} = 10$

$\Delta GDP = \Delta I * multiplier$

$= 200 \times 10$

$= \uparrow \$2{,}000$ million $= \uparrow \$2$ billion

4. The MPC is .8. The government increase spending by $100 million and taxes by $100 million.

multiplier = $\frac{1}{1-MPC}$

$= \frac{1}{1-.8}$

$= \frac{1}{.2} = 5$

$\Delta GDP = \Delta G \times multiplier$

$= 100 \times 5$

$= \uparrow 500$

$\Delta GDP = (\Delta T \times MPC) \times multi.$

$= (100 \times .8) \times 5$

$= 80 \times 5$

$= \downarrow 400$

net change $= \uparrow 100$ GDP

5. Calculate the MPC, MPS, and change in Real GDP. US economy experiences a change in income in $100 billion, and consumption changes by $50 billion. Government decreases personal income taxes by $100 million.

$MPC = \frac{\Delta C}{\Delta Y}$

$= \frac{50}{100} = .5$

$MPC + MPS = 1$

$.5 + x = 1$

$x = .5$

$MPS = .5$

multiplier = $\frac{1}{MPS}$

$= \frac{1}{.5}$

$= 2$

$\Delta GDP = (\Delta T \times MPC) \times multiplier$

$= (100 \times .5) \times 2$

$= 50 \times 2$

$= \uparrow 100$