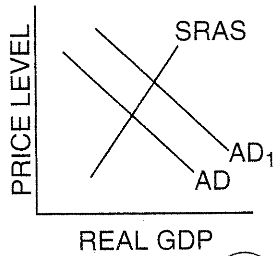
Summarizing Aggregate Demand and Aggregate Supply Shifts

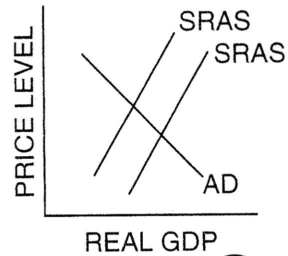
For each of the graphs below, identify the starting equilibrium PL and Y. Then show the shift given for each graph and identify the new equilibrium PL and Y. Indicate the resulting change in price level, unemployment, and real GDP by circling the up arrow for an increase or the down arrow for a decrease.

1. Increase in AD



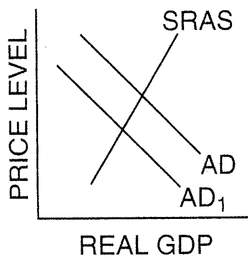
Real GDP	(↑)	↓
Price level	(↑)	↓
Unemployment	↑	(↓)

2. Increase in AS



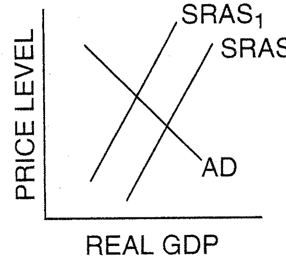
Real GDP	(↑)	↓
Price level	↑	(↓)
Unemployment	↑	(↓)

3. Decrease in AD



Real GDP	↑	(↓)
Price level	↑	(↓)
Unemployment	(↑)	↓

4. Decrease in AS



Real GDP	↑	(↓)
Price level	(↑)	↓
Unemployment	(↑)	↓

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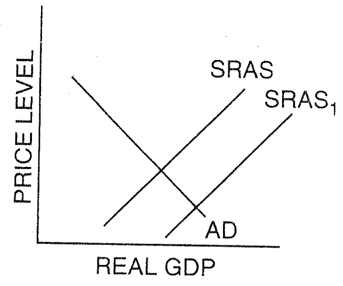
Changes in Short-Run Aggregate Supply and Aggregate Demand

The equilibrium price and quantity in the economy will change when either the short-run aggregate supply (SRAS) or the aggregate demand (AD) curve shifts. The AD curve shifts when any of the components of AD change—consumption (C), investment (I), government spending (G), exports (X), or imports (M). The aggregate supply (AS) curve shifts when there are changes in the price of inputs (e.g., nominal wages, oil prices) or changes in productivity.

Changes in the Equilibrium Price Level and Output

For each situation described below, illustrate the change on the AD and AS graph and describe the effect on the equilibrium price level and real gross domestic product (GDP) by circling the correct symbol: ↑ for increase, ↓ for decrease, or — for unchanged

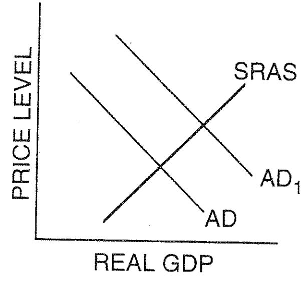
1. Business investment increases.



Price level ↑ (↓) —

Real GDP (↑) ↓ —

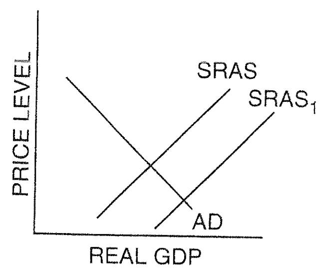
2. The government increases spending.



Price level: (↑) ↓ —

Real GDP: (↑) ↓ —

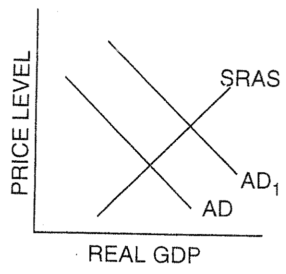
3. New oil discoveries cause large decreases in energy prices.



Price level ↑ (↓) —

Real GDP (↑) ↓ —

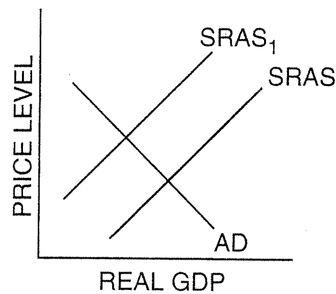
4. Consumer spending increases.



Price level: (↑) ↓ —

Real GDP: (↑) ↓ —

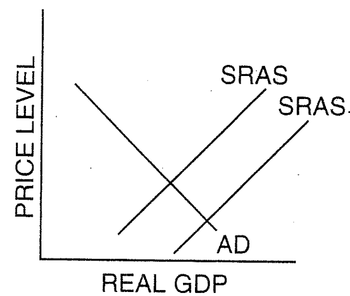
5. Production costs increase.



Price level (↑) ↓ —

Real GDP ↑ (↓) —

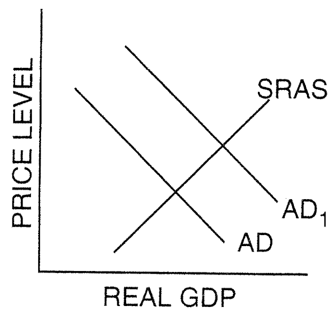
6. New technology and better education increase labor productivity.



Price level ↑ (↓) —

Real GDP (↑) ↓ —

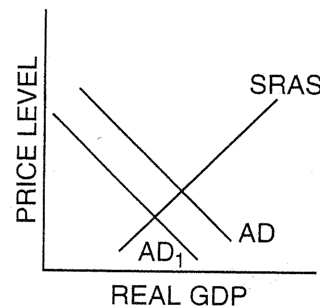
7. Consumers' confidence improves.



Price level: (↑) ↓ —

Real GDP: (↑) ↓ —

8. Net exports decrease.



Price level: ↑ (↓) —

Real GDP: ↑ (↓) —

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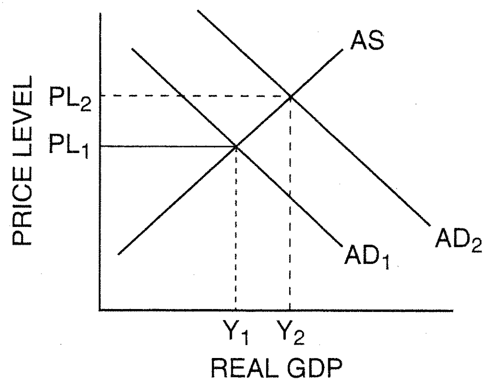
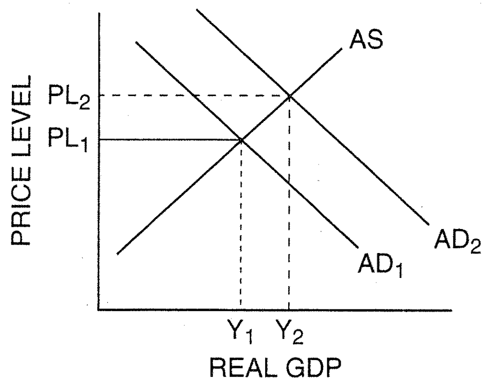
Graphing Demand and Supply Shocks

Draw an AS/AD graph to illustrate the change given in each of the questions below. On your graph be sure to label the axes (PL and Y), the AS and AD curves, and the starting and ending equilibrium PL and Y (these should be placed on the axes).

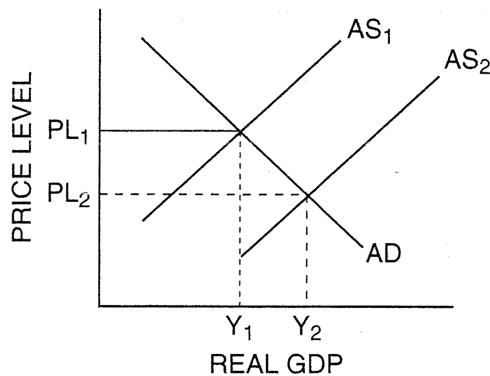
9. Economic booms in both Japan and Europe result in massive increases in orders for exported goods from the United States.



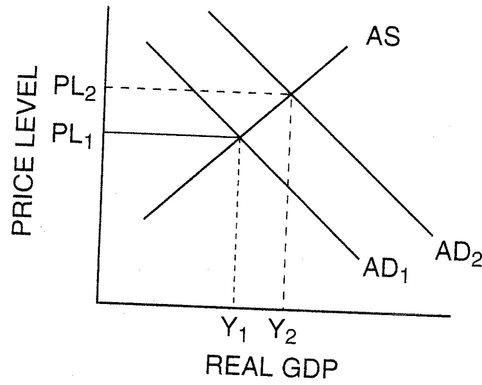
10. The government reduces taxes and increases transfer payments.



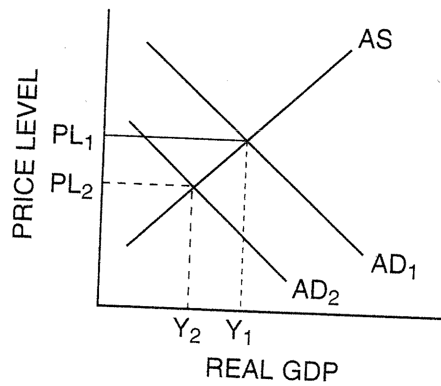
11. Fine weather results in the highest corn and wheat yields in 40 years.



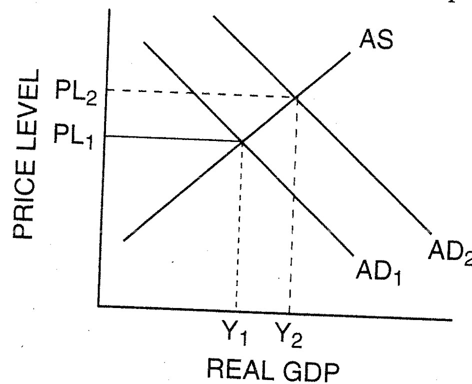
12. While the United States was in the midst of the Great Depression, a foreign power attacked, Congress declared war, and more than 1,000,000 soldiers were drafted in the first year while defense spending was increased several times over.



13. To balance the budget, the federal government cuts Social Security payments by 10 percent and federal aid to education by 20 percent.



14. During a long, slow recovery from a recession, consumers postponed major purchases. Suddenly they begin to buy cars, refrigerators, televisions, and furnaces to replace their failing models.



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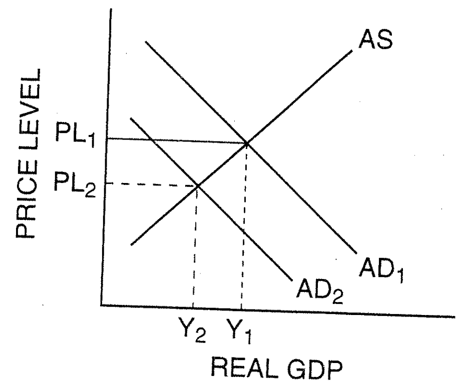
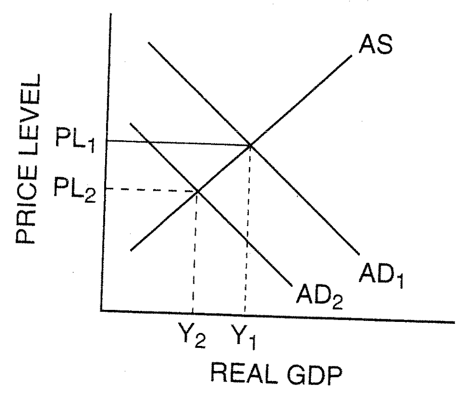
15. In response to other dramatic changes, the government raises taxes and reduces transfer payments in the hope of balancing the federal budget.



16. News of possible future layoffs frightens the public into reducing spending and increasing saving for the feared "rainy day."



The Tools of Fiscal Policy

Changes in taxes and government spending designed to affect the level of aggregate demand in the economy are called *fiscal policy*.

Recall that *aggregate demand* is the total amount of spending on goods and services in the economy during a stated period of time and is made up of consumer spending (C), investment (I), government spending (G), and net exports (Xn). *Aggregate supply* is the total amount of goods and services available in the economy.

During a recession, the short-run equilibrium is below the full-employment level of output. Aggregate demand is too low to bring about full employment of resources. Government can increase aggregate demand by spending more and/or cutting taxes. Increasing aggregate demand to move the economy toward full employment is *expansionary fiscal policy*. Expansionary fiscal policy increases employment but also can raise the price level and result in budget deficits.

If the level of aggregate demand is too high, it creates inflationary pressures. Government can decrease aggregate demand by reducing spending and/or increasing taxes. Decreasing aggregate demand to decrease inflationary pressures is *contractionary fiscal policy*. Contractionary fiscal policy reduces inflationary pressures but can also decrease output and employment. Contractionary fiscal policy can result in budget surpluses (or smaller budget deficits).

Student Alert: **Remember that the multiplier is different for taxes and for spending!**

Decide whether each of the following fiscal policies of the federal government is expansionary or contractionary. Write *expansionary* or *contractionary*, and explain the reasons for your choice.

1. The government cuts business and personal income taxes and increases its own spending.
Expansionary. The decrease in personal income taxes increases disposable income and thus increases consumption spending. The business tax cut increases investment spending, and the increase in government spending increases government demand.

2. The government increases the personal income tax, Social Security tax, and corporate income tax. Government spending stays the same.
Contractionary. Business income and personal disposable income decrease because of the tax increases, thus reducing consumption and investment spending. Government demand is unchanged.

3. Government spending goes up while taxes remain the same.
Expansionary. Higher government spending without a corresponding rise in tax receipts increases aggregate demand in the economy.

4. The government reduces the wages of its employees while raising taxes on consumers and businesses. Other government spending remains the same.
Contractionary. Reduction in government spending results in a decrease in AD. Increases in taxes on consumers reduce disposable income and consumption, and increased business taxes will reduce investment. The decrease in both consumption and investment will reduce aggregate demand.

Effects of Fiscal Policy

Test your understanding of fiscal policy by completing Table 5-1.1. Your choices for each situation must be consistent—that is, you should choose either an expansionary or contractionary fiscal policy. (Fiscal policy cannot provide a solution to one of the situations.) Fill in the spaces as follows:

Column A: Objective for aggregate demand

Draw an up arrow to increase aggregate demand or a down arrow to decrease aggregate demand.

Column B: Action on taxes

Draw an up arrow to increase taxes or a down arrow to decrease taxes.

Column C: Action on government spending

Draw an up arrow to increase government spending or a down arrow to decrease government spending.

Column D: Effect on federal budget

Write *toward deficit* if your action will increase the deficit (or reduce the surplus) or *toward surplus* if your action will reduce the deficit (or increase the surplus).

Column E: Effect on national debt

Draw an up arrow if your action will increase the national debt or a down arrow if your action will decrease the national debt.

Table 5-1.1
Effects of Fiscal Policy

	(A) Objective for aggregate demand	(B) Action on taxes	(C) Action on government spending	(D) Effect on federal budget	(E) Effect on national debt
1. National unemployment rate rises to 12 percent.	↑	↓	↑	***Toward deficit***	↑
2. Inflation is strong at a rate of 14 percent per year.	↓	↑	↓	***Toward surplus***	↓
3. Surverys show consumers are losing confidence in the economy, retail sales are weak, and business inventories are increasing rapidly.	↑	↓	↑	***Toward deficit***	↑
4. Business sales and investment are expanding rapidly, and economists think strong inflation lies ahead.	↓	↑	↓	***Toward surplus***	↓
5. Inflation persists while unemployment stays high.	***Fiscal policy is unable to provide a solution to the situation of high inflation and unemployment: stagflation.***				

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Discretionary Fiscal Policy and Automatic Stabilizers

One of the goals of economic policy is to stabilize the economy. This means promoting full employment and stable prices. To accomplish this, aggregate demand must be near the full-employment level of output. If aggregate demand is too low, there will be unemployment. If aggregate demand is too high, there will be inflation.

If aggregate demand is too low, government can use fiscal policy to stimulate the economy through increased spending or decreased taxes. These policies are examples of *expansionary fiscal policy*. If government wants to decrease aggregate demand, it can pursue a *contractionary fiscal policy* by decreasing taxes or increasing spending.

If government has to pass a law or take some other specific action to change taxes or spending, then the action is at the government's discretion and the policy is *discretionary policy*. If the effect happens automatically as the economic situation changes, then the policy is the result of an *automatic stabilizer*. An example of an automatic stabilizer is unemployment compensation. If the economy goes into a recession, some people are laid off and are eligible to receive unemployment compensation. The payment creates income and spending to keep aggregate demand from falling as much as it would have. Unemployment compensation stabilizes the economy automatically during a recession.

For each of the scenarios on the following page, indicate whether it represents an automatic (A) or discretionary (D) stabilizer, and whether it is an example of expansionary (E) or contractionary (C) fiscal policy.

Economic scenarios	Automatic (A) or Discretionary (D)	Expansionary (E) or Contractionary (C)
Example: Recession raises amount of unemployment compensation.	*A*	*E*
1. The government cuts personal income tax rates.	*D*	*E*
2. The government eliminates favorable tax treatment on long-term capital gains.	*D*	*C*
3. Incomes rise; as a result, people pay a larger fraction of their income in taxes.	*A*	*C*
4. As a result of a recession, more families qualify for food stamps and welfare benefits.	*A*	*E*

Economic scenarios	Automatic (A) or Discretionary (D)	Expansionary (E) or Contractionary (C)
5. The government eliminates the deductibility of interest expense for tax purposes.	*D*	*C*
6. The government launches a major new space program to explore Mars.	*D*	*E*
7. The government raises Social Security taxes.	*D*	*C*
8. Corporate profits increase; as a result, government collects more corporate income taxes.	*A*	*C*
9. The government raises corporate income tax rates.	*D*	*C*
10. The government gives all its employees a large pay raise.	*D*	*E*

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Monetary and Fiscal Policy

Tools of Monetary and Fiscal Policy

Both monetary and fiscal policy can be used to influence the inflation rate and real output. In Table 5-3.1, use an up or down arrow to indicate what effect each specific policy has on inflation and real output in the short run.

Table 5-3.1
Monetary Policy

Monetary policy	Price level	Real output
1. Raise the federal funds rate	↓	↓
2. Decrease the discount rate	↑	↑
3. Decrease reserve requirement	↑	↑

Fiscal policy	Price level	Real output
4. Increase government spending	↑	↑
5. Increase taxes	↓	↓