# Tools of Monetary Policy

Use the tools of monetary policy and what you learned in previous lessons to answer each of the following questions.

1. The central bank would like to decrease unemployment in the economy. What open market operation would be appropriate?
2. Name two ways a central bank could decrease inflation in an economy.
3. Suppose that the reserve ratio is 10% when the Fed buys $150,000 of U.S. Treasury bills from the banking system. If the banking system does NOT want to hold any excess reserves, calculate the change in the money supply.
4. Suppose that the reserve ratio is 10% when the Fed buys $100,000 of U.S. Treasury bills from the banking system. If the banking system holds an additional 10% in excess reserves, calculate the change in the money supply.
5. Suppose the reserve requirement is 20% when the Fed sells $20,000 of U.S. Treasury bills to the banking system. If the banking system does NOT want to hold any excess reserves, calculate the change in the money supply.
6. Suppose real GDP is $750 trillion while potential GDP is $1,000 trillion. What open market operation could the central bank use to close the gap? How much would open market operation need to be if the reserve requirement was 10%?
7. Suppose real GDP is $2,500 trillion while potential GDP is $1,000 trillion. What open market operation could the central bank use to close the gap? How much would open market operation need to be if the reserve requirement was 20%?

# Tools of Monetary Policy Answer Key

Use the tools of monetary policy and what you learned in previous lessons to answer each of the following questions.

1. The central bank would like to decrease unemployment in the economy. What open-market operation would be appropriate?

*Buy treasury bills*

1. Name 2 ways a central bank could decrease inflation in an economy.

*Any 2: Sell treasury bills, increase the reserve requirement, or increase the discount rate*

1. Suppose that the reserve ratio is 10% when the Fed buys $150,000 of U.S. Treasury bills from the banking system. If the banking system does NOT want to hold any excess reserves, calculate the change in the money supply.

*MM = 1/.10 = 10; 10 x $150,000 = $1,500,000 increase in the money supply*

1. Suppose that the reserve ratio is 10% when the Fed buys $100,000 of U.S. Treasury bills from the banking system. If the banking system holds an additional 10% in excess reserves, calculate the change in the money supply.

*MM = 1/.2 = 5; 5 x $100,000 = $500,000 increase in the money supply*

1. Suppose the reserve requirement is 20% when the Fed sells $20,000 of U.S. Treasury bills to the banking system. If the banking system does NOT want to hold any excess reserves, calculate the change in the money supply.

*MM = 1/.2 = 5; 5 x $20,000 = $200,000 decrease in the money supply*

1. Suppose real GDP is $750 trillion while potential GDP is $1,000 trillion. What open market operation could the central bank use to close the gap? How much would open market operation need to be if the reserve requirement was 10%?

*To fix the recessionary gap of $250 trillion, the central bank should buy T-bills. MM = 1/.1*

*= 10. $250/10 = $25 trillion purchase of T-bills.*

1. Suppose real GDP is $2,500 trillion while potential GDP is $1,000 trillion. What open market operation could the central bank use to close the gap? How much would open market operation need to be if the reserve requirement was 20%?

*To fix an inflationary gap of $1,500 trillion, the central bank should sell T-bills. MM = 1/.2*

*= 5. $1,500/5 = $300 trillion sale of T-bills.*