

2. Assume that commercial banks must hold a minimum of 20% of their deposits as reserves. Now suppose that the central bank of the country sells \$100,000 of government bonds to commercial banks.
- (a) Calculate the maximum change and state the direction of change in the money supply as a result of the central bank bond sale. Show your work.
- (b) Draw a correctly labeled graph of the money market and show the effect of the change in the money supply identified in part (a) on the nominal interest rate.
- (c) Given the change in the money supply in part (a), if the velocity of money is constant, what will happen to the nominal gross domestic product? Explain.
- (d) Based on the change in the nominal gross domestic product in part (c), what happens to the price level if the real gross domestic product is constant?

Begin your response to this question at the top of a new page in the separate Free Response booklet and fill in the appropriate circle at the top of each page to indicate the question number.

2. The Federal Reserve can influence the supply of money.
- (a) Assume that the Federal Reserve targets a lower federal funds rate.
- (i) What open market operation can the Federal Reserve use to achieve the lower target?
- (ii) Given your answer to part (a)(i), what will happen to the price of government bonds?
- (b) Using a correctly labeled graph of the money market, show the effect of the open market operation from part (a)(i) on the nominal interest rate.
- (c) Assume that the Federal Reserve buys government bonds from commercial banks. Based only on this transaction, will the level of required reserves in the commercial banks increase, decrease, or remain the same?
- (d) Another monetary policy action involves changing the discount rate. Define the discount rate.
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