

2.

	Monetary base	Money multiplier	Money supply
a)	↑	-	↑
b)	-	↓	↓
c)	↓	-	↓
d)	-	↓	↓
e)	↑	-	↑

3.

- a) 1000
- b) 1000
- c) 5000
- d) $5000/3=1666.7$
- e) 10% for each of the four scenarios

4. The money demand function is given as

$$\left(\frac{M}{P}\right)^d = kY.$$

- a. To find the average inflation rate the money demand function can be expressed in terms of growth rates:

$$\% \text{ growth } M^d - \% \text{ growth } P = \% \text{ growth } Y.$$

The parameter k is a constant, so it can be ignored. The percentage change in nominal money demand M^d is the same as the growth in the money supply because nominal money demand has to equal nominal money supply. If nominal money demand grows 12 percent and real income (Y) grows 4 percent then the growth of the price level is 8 percent.

- b. From the answer to part (a), it follows that an increase in real income growth will result in a lower average inflation rate. For example, if real income grows at 6 percent and money supply growth remains at 12 percent, then inflation falls to 6 percent. In this case, a larger money supply is required to support a higher level of GDP, resulting in lower inflation.
- c. If velocity growth is positive, then all else the same inflation will be higher. From the quantity equation we know that:

$$\% \text{ growth } M + \% \text{ growth } V = \% \text{ growth } P + \% \text{ growth } Y.$$

Suppose that the money supply grows by 12 percent and real income grows by 4 percent. When velocity growth is zero, inflation is 8 percent. Suppose now that velocity grows 2 percent: this will cause prices to grow by 10 percent. Inflation increases because the same quantity of money is being used more often to chase the same amount of goods. In this case, the money supply should grow more slowly to compensate for the positive growth in velocity.