CHAPTER 9
Building the Aggregate Expenditures Model

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Multiple Choice Questions

Consumption function/APC/MPC

1. The most important determinant of consumer spending is:
   A) the level of household debt.
   B) consumer expectations.
   C) the stock of wealth.
   D) the level of income.

2. In the aggregate expenditures model, the most important determinant of consumption and saving is the:
   A) level of bank credit.
   B) level of income.
   C) interest rate.
   D) price level.

3. If Smith's disposable income increases from $1,200 to $1,700 and her level of saving increases from minus $100 to a plus $100, her marginal propensity to:
   A) save is three-fifths.
   B) consume is one-half.
   C) consume is three-fifths.
   D) consume is one-sixth.

4. With an MPS of .4, the MPC will be:
   A) 1.0 minus .4.
   B) .4 minus 1.0.
   C) the reciprocal of the MPS.
   D) .4.

5. The MPC can be defined as that fraction of a:
   A) change in income that is not spent.
B) change in income that is spent.
C) given total income that is not consumed.
D) given total income that is consumed.

6. The 45-degree line on a chart relating consumption and income shows:
   A) all points where the MPC is constant.
   B) all points at which saving and income are equal.
   C) all the points at which consumption and income are equal.
   D) the amounts households will plan to save at each possible level of income.

7. As disposable income goes up the:
   A) APC falls.
   B) APS falls.
   C) volume of consumption declines absolutely.
   D) volume of investment diminishes.

8. The consumption schedule shows:
   A) that the MPC increases in proportion to GDP.
   B) that households consume more when interest rates are low.
   C) that consumption depends primarily on the level of business investment.
   D) the amounts households plan or intend to consume at various possible levels of aggregate income.

9. The consumption schedule relates:
   A) consumption to the level of disposable income.
   B) saving to the level of disposable income.
   C) disposable income to domestic income.
   D) consumption to saving.

10. A decline in disposable income:
    A) increases consumption by moving upward along a specific consumption schedule.
    B) decreases consumption because it shifts the consumption schedule downward.
    C) decreases consumption by moving downward along a specific consumption schedule.
    D) increases consumption because it shifts the consumption schedule upward.

11. The APC is calculated as:
    A) change in consumption / change in income
    B) consumption / income
    C) change in income / change in consumption
    D) income / consumption

12. The consumption schedule shows:
    A) a direct relationship between aggregate consumption and accumulated wealth.
    B) a direct relationship between aggregate consumption and aggregate income.
    C) an inverse relationship between aggregate consumption and accumulated financial wealth.
    D) an inverse relationship between aggregate consumption and aggregate income.

13. The APC can be defined as the fraction of a:
    A) change in income that is not spent.
14.

The consumption schedule in the above diagram indicates that:
A) consumers will maximize their satisfaction where the consumption schedule and 45° line intersect.
B) up to a point consumption exceeds income, but then falls below income.
C) the MPC falls as income increases.
D) households consume as much as they earn.

15. The consumption schedule is drawn on the assumption that as income increases consumption will:
A) be unaffected.
B) increase absolutely, but remain constant as a percentage of income.
C) increase absolutely, but decline as a percentage of income.
D) increase both absolutely and as a percentage of income.

16. Which of the following is correct?
A) APC + APS = 1.
B) APC + MPS = 1.
C) APS + MPC = 1.
D) APS + MPS = 1.

17. The consumption schedule is such that:
A) both the APC and the MPC increase as income rises.
B) the APC is constant and the MPC declines as income rises.
C) the MPC is constant and the APC declines as income rises.
D) the MPC and APC must be equal at all levels of income.

18. For all levels of income to the left of the intersection of the 45-degree line and the consumption schedule, the APC is:
A) greater than 100 percent.
B) less than the APS.
C) equal to the MPC.
D) equal to 100 percent.

19. In the aggregate expenditures model, the:
A) MPC is greater than zero, but less than one.
B) MPC and APC are equal at the point where the consumption schedule intersects the 45-degree line.
C) APS is positive at all income levels.
D) MPC is equal to or greater than one at all income levels.

20. In the aggregate expenditures model, the size of the MPC is assumed to be:
A) less than zero.
B) greater than one.
C) greater than zero, but less than one.
D) two or more.

21. As disposable income increases, consumption:
A) and saving both increase.
B) and saving both decrease.
C) decreases and saving increases.
D) increases and saving decreases.

22. The average propensity to consume indicates the:
A) amount by which income exceeds consumption.
B) relationship between a change in saving and the consequent change in consumption.
C) percentage of total income that will be consumed.
D) percentage of a change in income that will be consumed.

23. The relationship between consumption and disposable income is such that:
A) an inverse and stable relationship exists between consumption and income.
B) a direct, but very volatile, relationship exists between consumption and income.
C) a direct and quite stable relationship exists between consumption and income.
D) the two are always equal.

24. If the MPC is .8 and disposable income is $200, then
A) consumption and saving cannot be determined from the information given.
B) saving will be $20.
C) personal consumption expenditures will be $80.
D) saving will be $40.

25. The MPC for an economy is:
A) the slope of the consumption schedule or line.
B) the slope of the savings schedule or line.
C) 1 divided by the slope of the consumption schedule or line.
D) 1 divided by the slope of the savings schedule or line.

26. In contrast to the investment schedule, the consumption schedule is:
A) relatively stable.
B) relatively unstable.
C) downsloping.
D) horizontal.

Use the following to answer questions 27-29:
27. (Advanced analysis) Refer to the above diagram. The MPC and APC are both constant as income increases for:
   A) none of the consumption schedules shown.
   B) $C_3$ only.
   C) $C_3$ and $C_4$ only.
   D) $C_1$ and $C_2$ only.

28. (Advanced analysis) Refer to the above diagram. The APC diminishes as income increases for:
   A) none of the consumption schedules shown.
   B) $C_3$ only.
   C) $C_1$, $C_2$, and $C_4$ only.
   D) $C_4$ only.

29. (Advanced analysis) Refer to the above diagram. The MPC is constant as income rises for:
   A) none of the consumption schedules shown.
   B) $C_3$ only.
   C) $C_1$, $C_2$, and $C_3$ only.
   D) $C_4$ only.

Use the following to answer questions 30-31:

(Advanced analysis) Answer the next question(s) on the basis of the following consumption schedule: $C = 20 + .9Y$, where $C$ is consumption and $Y$ is disposable income.

30. Refer to the above data. The MPC is:
    A) .45.
    B) .20.
    C) .50.
    D) .90.

31. Refer to the above data. At an $800$ level of disposable income, the level of saving is:
    A) $180$.
    B) $740$.
    C) $60$.
    D) $18$. 
32. Which one of the following will cause a movement down along an economy's consumption schedule?
   A) an increase in stock prices  
   B) a decrease in stock prices  
   C) an increase in consumer indebtedness  
   D) a decrease in disposable income

33. The above diagram shows consumption schedules for economies A and B. We can say that the:
   A) MPC is greater in B than in A.  
   B) APC at any given income level is greater in B than in A.  
   C) MPS is smaller in B than in A.  
   D) MPC is greater in A than in B.

34. At the point where the consumption schedule intersects the 45-degree line:
   A) the MPC is 1.00.  
   B) the APC is 1.00.  
   C) saving is equal to consumption.  
   D) the economy is in equilibrium.

35. Holly's break-even level of income is $10,000 and her MPC is 0.75. If her actual disposable income is $16,000, her level of:
   A) consumption spending will be $14,500.  
   B) consumption spending will be $15,500.  
   C) consumption spending will be $13,000.  
   D) saving will be $2,500.

36. If Ben's MPC is .80, this means that he will:
   A) spend eight-tenths of any increase in his disposable income.  
   B) spend eight-tenths of any level of disposable income.  
   C) break even when his disposable income is $8,000.  
   D) save two-tenths of any level of disposable income.

37. Suppose a family's consumption exceeds of its disposable income. This means that its:
   A) MPC is greater than 1.  
   B) MPS is negative.  
   C) APC is greater than 1.  
   D) APS is positive.

38. (Advanced analysis) If the equation for the consumption schedule is \( C = 20 + 0.8Y \), where \( C \) is consumption and \( Y \) is
disposable income, then the average propensity to consume is 1 when disposable income is:
A) $80.
B) $100.
C) $120.
D) $160.

39. (Advanced analysis) The equation \( C = 35 + .75Y \), where \( C \) is consumption and \( Y \) is disposable income, shows that:
A) households will consume three-fourths of whatever level of disposable income they receive.
B) households will consume $35 if their disposable income is zero and will consume three-fourths of any increase in disposable income they receive.
C) there is an inverse relationship between disposable income and consumption.
D) households will save $35 if their disposable income is zero and will consume three-fourths of any increase in disposable income they receive.

40. (Advanced analysis) If the equation \( C = 20 + .6Y \), where \( C \) is consumption and \( Y \) is disposable income, were graphed:
A) the vertical intercept would be +.6 and the slope would be +20.
B) it would reveal an inverse relationship between consumption and disposable income.
C) the vertical intercept would be negative, but consumption would increase as disposable income rises.
D) the vertical intercept would be +20 and the slope would be +.6.

41. One can determine the amount of any level of total income that is consumed by:
A) multiplying total income by the slope of the consumption schedule.
B) multiplying total income by the APC.
C) subtracting the MPS from total income.
D) multiplying total income by the MPC.

42. Which of the following is correct?
A) \( MPC + MPS = APC + APS \)
B) \( APC + MPS = APS + MPC \)
C) \( APC + MPC = APS + MPS \)
D) \( APC - APS = MPC - MPS \)

Saving function/APS/MPS

43. In the aggregate expenditures model:
A) consumption rises, but saving declines, as disposable income rises.
B) saving varies inversely with the profitability of investment.
C) saving varies directly with the level of disposable income.
D) saving is inversely related to the rate of interest.

44. In the aggregate expenditures model, dissaving means:
A) the same thing as disinvesting.
B) that households are spending in excess of their current incomes.
C) that saving and investment are equal.
D) that disposable income is less than zero.

45. Dissaving occurs where:
A) income exceeds consumption.
B) saving exceeds consumption.
C) consumption exceeds income.
D) saving exceeds income.

46. Which of the following relations is not correct?
A) \[1 - \text{MPC} = \text{MPS}\]
B) \[\text{APS} + \text{APC} = 1\]
C) \[\text{MPS} = \text{MPC} + 1\]
D) \[\text{MPC} + \text{MPS} = 1\]

47. The saving schedule is drawn on the assumption that as income increases:
A) saving will decline absolutely and as a percentage of income.
B) saving will increase absolutely, but remain constant as a percentage of income.
C) saving will increase absolutely, but decline as a percentage of income.
D) saving will increase absolutely and as a percentage of income.

48. At the point where the consumption schedule intersects the 45-degree line:
A) the MPC equals 1.
B) the APC is zero.
C) saving equals income.
D) saving is zero.

49. The saving schedule is such that as aggregate income increases by a certain amount saving:
A) increases by the same amount as the increase in income.
B) does not change.
C) increases, but by a smaller amount.
D) increases by an even larger amount.

50. If the consumption schedule is linear, then the:
A) saving schedule will also be linear.
B) MPS will decline as income rises.
C) MPC will decline as income rises.
D) APC will be constant at all levels of income.

51. Given the consumption schedule, it is possible to graph the relevant saving schedule by:
A) subtracting the MPC from "one" at each level of income.
B) subtracting investment from consumption at each level of GDP.
C) plotting the horizontal differences between the consumption schedule and the 45-degree line.
D) plotting the vertical differences between the consumption schedule and the 45-degree line.

52. As aggregate income decreases, the APC:
A) and APS will both increase.
B) will decrease, but the APS will increase.
C) will increase, but the APS will decrease.
D) and APS will both decrease.

53. If the marginal propensity to consume is .9, then the marginal propensity to save must be:
A) 1.
54. The greater is the marginal propensity to consume:
   A) the smaller is the marginal propensity to save.
   B) the higher is the interest rate.
   C) the lower is the average propensity to consume.
   D) the lower is the price level.

55. If the saving schedule is a straight line, the:
   A) MPS must be constant.
   B) APS must be constant.
   C) APC must be constant.
   D) MPC must be rising.

56. Which one of the following will cause a movement up along an economy's saving schedule?
   A) an increase in household debt outstanding
   B) an increase in disposable income
   C) an increase in stock prices
   D) an increase in interest rates

**Shifts in consumption and saving functions**

57. In the late 1990s the U. S. stock market boomed, causing U.S. consumption to rise. Economists refer to this outcome as the:
   A) Keynes effect.
   B) interest-rate effect.
   C) wealth effect.
   D) multiplier effect.

58. The wealth effect is shown graphically as a:
   A) shift of the consumption schedule.
   B) movement along an existing consumption schedule.
   C) shift of the investment schedule.
   D) movement along an existing investment schedule.

Use the following to answer questions 59-62:
59. Refer to the above graph. A movement from b to a along C₁ might be caused by a:
   A) recession.
   B) wealth effect of an increase in stock market prices.
   C) decrease in income tax rates.
   D) increase in saving.

60. Refer to the above graph. A shift of the consumption schedule from C₁ to C₂ might be caused by a:
   A) recession.
   B) wealth effect of an increase in stock market prices.
   C) increase in income tax rates.
   D) increase in saving.

61. Refer to the above graph. A movement from a to b along C₁ might be caused by a:
   A) recession.
   B) wealth effect of an increase in stock market prices.
   C) increase in income tax rates.
   D) increase in real GDP.

62. Refer to the above graph. A shift of the consumption schedule from C₂ to C₁ might be caused by a:
   A) increase in real GDP.
   B) reverse wealth effect, caused by a decrease in stock market prices.
   C) decrease in income tax rates.
   D) decrease in saving.

63. An upward shift of the saving schedule suggests:
   A) nothing with respect to changes in the APC and APS.
   B) that the APC and APS have both decreased at each GDP level.
   C) that the APC and APS have both increased at each GDP level.
   D) that the APC has decreased and the APS has increased at each GDP level.

64. Which of the following will not tend to shift the consumption schedule upward?
   A) a currently small stock of durable goods in the possession of consumers
   B) the expectation of a future decline in the consumer price index
C) a currently low level of household debt.
D) the expectation of future shortages of essential consumer goods.

65. If the consumption schedule shifts upward and the shift was not caused by a tax change, the saving schedule:
A) will not shift.
B) may shift either upward or downward.
C) will shift downward.
D) will also shift upward.

66. Which of the following will not cause the consumption schedule to shift?
A) a sharp increase in the amount of wealth held by households
B) a change in consumer incomes
C) the expectation of a recession
D) a growing expectation that consumer durables will be in short supply

67. An increase in personal taxes will shift:
A) both the consumption and saving schedules downward.
B) both the consumption and saving schedules upward.
C) the consumption schedule upward and the saving schedule downward.
D) the consumption schedule downward and the saving schedule upward.

68. If for some reason households become increasingly thrifty, we could show this by:
A) a downshift of the saving schedule.
B) an upshift of the consumption schedule.
C) an upshift of the saving schedule.
D) an increase in the equilibrium GDP.

69.

Suppose the economy's saving schedule shifts from $S_1$ to $S_2$ as shown in the above diagram. We can say that its:
A) MPC has increased.
B) MPS has increased.
C) APS has increased at all levels of disposable income.
D) APS has decreased at all levels of disposable income.

70. If a consumption schedule shifts upward, this necessarily means that the:
A) MPC has increased.
B) MPS has decreased.
C) APC is now higher at each level of disposable income.
D) APC is now lower at each level of disposable income.
71. Assume the economy's consumption and saving schedules simultaneously shift downward. This must be the result of:
   A) an increase in disposable income.
   B) an increase in household wealth.
   C) an increase in personal taxes.
   D) the expectation of a recession.

72. Suppose an economy's consumption schedule shifts from $C_1$ to $C_2$ as shown in the above diagram. We can say that its:
   A) MPC has increased but its APC at each income level is unchanged.
   B) APC at each income level is increased but its MPC is unchanged.
   C) MPC and APC at each income level have both increased.
   D) MPC and APC at each income level have both decreased.

Graphs/tables: mixed consumption and saving

Use the following to answer questions 73-75:

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73. Refer to the above data. The marginal propensity to consume is:
   A) .25.
   B) .75.
   C) .20.
   D) .80.

74. Refer to the above data. At the $200 level of disposable income:
   A) the marginal propensity to save is 2½ percent.
   B) dissaving is $5.
   C) the average propensity to save is .20.
   D) the average propensity to consume is .80.
75. Refer to the above data. If disposable income was $325, we would expect consumption to be:
   A) $315.
   B) $305.
   C) $20.
   D) $290.

Use the following to answer questions 76-81:

76. Refer to the above diagram. The average propensity to consume is 1 at point:
   A) $F$.
   B) $A$.
   C) $D$.
   D) $B$.

77. Refer to the above diagram. The marginal propensity to consume is equal to:
   A) $AE/0E$.
   B) $CF/CD$.
   C) $CB/AB$.
   D) $CD/CF$.
   E) $CB/BF$.

78. Refer to the above diagram. At income level $F$ the volume of saving is:
   A) $BD$.
   B) $AB$.
   C) $CF-BF$.
   D) $CD$.

79. Refer to the above diagram. Consumption will be equal to income at:
   A) an income of $E$.
   B) an income of $F$.
   C) point $C$.
   D) point $D$. 
80. Refer to the above diagram. The economy is dissaving:
   A) in the amount \( CD \).
   B) at all income levels greater than \( E \).
   C) at income level \( H \).
   D) at income level \( E \).

81. Refer to the above diagram. The marginal propensity to save is:
   A) \( \frac{CD}{EF} \).
   B) \( \frac{CB}{CF} \).
   C) \( \frac{CB}{AF} \).
   D) \( \frac{EF}{CB} \).

Use the following to answer questions 82-83:

82. The above figure suggests that:
   A) consumption would be $60 billion even if GDP were zero.
   B) saving is zero at the $120 billion GDP.
   C) as GDP increases, consumption decreases as a percentage of GDP.
   D) as GDP increases, consumption decreases absolutely.

83. Refer to the above figure. If the relevant saving schedule were constructed, one would find that:
   A) saving would be \textit{minus} $20 billion at the zero level of GDP.
   B) aggregate saving would be $60 at the $60 billion level of income.
   C) its slope would be 1/2.
   D) it would slope downward and to the right

Use the following to answer questions 84-86:

Answer the next question(s) on the basis of the following data for a hypothetical economy.
Refer to the above data. The marginal propensity to consume is:
A) .80.
B) .75.
C) .20.
D) .25.

Refer to the above data. At the $100 level of income, the average propensity to save is:
A) .10.
B) .20.
C) .25.
D) .90.

Refer to the above data. If plotted on a graph, the slope of the saving schedule would be:
A) .80.
B) .10.
C) .20.
D) .15.

Use the following to answer questions 87-91:

Refer to the above diagram. The marginal propensity to save is equal to:
A) \( \frac{CD}{0D} \).
B) \( \frac{0B}{0A} \).
C) \( \frac{0D}{0D} \).
D) \( \frac{CD}{BD} \).

Refer to the above diagram. At disposable income level \( D \), the average propensity to save is equal to:
A) \( \frac{CD}{BD} \).
B) \( \frac{CD}{D} \).
C) \( \frac{D}{CD} \).
D) $A/B$.

89. Refer to the above diagram. At disposable income level $D$, consumption is:
   A) equal to $CD$.
   B) equal to $D$ minus $CD$.
   C) equal to $CD/D$.
   D) equal to $CD$ plus $BD$.

90. Refer to the above diagram. Consumption equals disposable income when:
   A) disposable income is $B$.
   B) disposable income is $D$.
   C) $CD$ equals $A$.
   D) $B$ equals $CD$.

91. The saving schedule shown in the above diagram would shift downward if, all else equal:
   A) the average propensity to save increased at each income level.
   B) the marginal propensity to save rose at each income level.
   C) consumer wealth rose rapidly because of a significant increase in stock market prices.
   D) the real interest rate fell.

Use the following to answer questions 92-99:

Answer the next question(s) on the basis of the following consumption schedules for three private closed economies. DI signifies disposable income and C represents consumption expenditures. All figures are in billions of dollars.

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92. Refer to the above data. The marginal propensity to consume in economy (1):
   A) is .5.
   B) is .3.
   C) is .8.
   D) is .7.

93. Refer to the above data. The marginal propensity to consume:
   A) is highest in economy (1).
   B) is highest in economy (2).
   C) is highest in economy (3).
   D) cannot be calculated from the data given.

94. Refer to the above data. The marginal propensity to save:
   A) is highest in economy (1).
   B) is highest in economy (2).
C) is highest in economy (3).
D) cannot be determined from the data given.

95. Refer to the above data. At an income level of $40 billion, the average propensity to consume:
A) is highest in economy (1).
B) is highest in economy (2).
C) is highest in economy (3).
D) cannot be determined from the data given.

96. Refer to the above data. At an income level of $400 billion, the average propensity to save in economy (2) is:
A) .9125.
B) .0725.
C) .0875.
D) .9305.

97. (Advanced analysis) Refer to the above data. When plotted on a graph, the vertical intercept of the consumption schedule in economy (3) is _____ and the slope is _____.
A) minus $2; .9.
B) $2; .18.
C) $100; .5.
D) $2; .9.

98. Refer to the above data. Suppose that consumption decreased by $2 billion at each level of DI in each of the three countries. We can conclude that the:
A) marginal propensity to consume will remain unchanged in each of the three countries.
B) marginal propensity to consume will decline in each of the three countries.
C) average propensity to save will fall at each level of DI in each of the three countries.
D) marginal propensity to save will rise in each of the three countries.

99. Refer to the above data. The $2 billion increase in consumption mentioned in the previous question could have been caused by:
A) a decrease in consumer wealth.
B) new expectations of higher future income.
C) an increase in taxation.
D) an increase in saving.

Use the following to answer questions 100-103:

100. Refer to the above diagram. The break-even level of disposable income:
A) is zero.
B) is minus $10.
C) is $100.
D) cannot be determined from the information given.

101. Refer to the above diagram. The marginal propensity to consume is:
A) .2.
B) .8.
C) .4.
D) .3.

102. (Advanced analysis) The equation for the above saving schedule is:
A) \( Y_d = -20 + .8S \).
B) \( Y_d = 20 + .2S \).
C) \( S = -20 + .2Y_d \).
D) \( S = 20 + .8Y_d \).

103. Refer to the above diagram. The average propensity to consume:
A) is greater than 1 at all levels of disposable income above $100.
B) is greater than 1 at all levels of disposable income below $100.
C) is equal to the average propensity to save.
D) cannot be determined from the information given.

Use the following to answer questions 104-107:

104. Refer to the above diagram. The break-even level of GDP (= income) is:
A) zero.
B) $150.
C) $60.
D) $120.
105. Refer to the above diagram. The average propensity to consume is:
   A) greater than 1 at all levels of GDP above $150.
   B) greater than 1 at all levels of GDP below $150.
   C) zero.
   D) .6.

106. Refer to the above diagram. The marginal propensity to consume is:
   A) .4.
   B) .6.
   C) .5.
   D) .8.

107. (Advanced analysis) Refer to the above diagram. The equation for the consumption schedule is:
   A) \( C = .6Y \).
   B) \( Y = 60 + .6C \).
   C) \( C = 60 + .6Y \).
   D) \( C = 60 + .4Y \).

Use the following to answer questions 108-109:

(Advanced analysis) Answer the next question(s) on the basis of the following data:

<table>
<thead>
<tr>
<th>Disposable income ((Y_d))</th>
<th>Consumption ((C))</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0</td>
<td>$40</td>
</tr>
<tr>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>200</td>
<td>160</td>
</tr>
<tr>
<td>300</td>
<td>220</td>
</tr>
<tr>
<td>400</td>
<td>280</td>
</tr>
</tbody>
</table>

108. Which of the following equations correctly represents the above data?
   A) \( Y_d = 40 + .6C \)
   B) \( C = 60 + .4Y_d \)
   C) \( C = 40 + .6Y_d \)
   D) \( C = .6Y_d \)

109. Which of the following equations represents the saving schedule implicit in the above data?
   A) \( S = C - Y_d \)
   B) \( S = 40 + .4Y_d \)
   C) \( S = 40 + .6Y_d \)
   D) \( S = -40 + .4Y_d \)

Investment demand

110. Suppose that a new machine tool having a useful life of only one year costs $80,000. Suppose, also, that the net additional revenue resulting from buying this tool is expected to be $96,000. The expected rate of return on this tool is:
   A) 80 percent.
B) 8 percent.
C) 2 percent.
D) 20 percent.

111. Assume a machine which has a useful life of only one year costs $2,000. Assume, also, that net of such operating costs as power, taxes, and so forth, the additional revenue from the output of this machine is expected to be $2,300. The expected rate of return on this machine is:
A) 7.5 percent.
B) 10 percent.
C) 15 percent.
D) 20 percent.

112. If the firm in the previous question finds it can borrow funds at an interest rate of 10 percent the firm should:
A) not purchase the machine because the expected rate of return exceeds the interest rate.
B) not purchase the machine because the interest rate exceeds the expected rate of return.
C) purchase the machine because the expected rate of return exceeds the interest rate.
D) purchase the machine because the interest rate exceeds the expected rate of return.

113. The relationship between the real interest rate and investment is shown by the:
A) investment-demand schedule.
B) consumption of fixed capital schedule.
C) saving schedule.
D) aggregate supply curve.

114. Given the expected rate of return on all possible investment opportunities in the economy:
A) an increase in the real rate of interest will reduce the level of investment.
B) a decrease in the real rate of interest will reduce the level of investment.
C) a change in the real interest rate will have no impact on the level of investment.
D) an increase in the real interest rate will increase the level of investment.

115. A decline in the real interest rate will:
A) increase the amount of investment spending.
B) shift the investment schedule downward.
C) shift the investment-demand curve to the right.
D) shift the investment-demand curve to the left.

116. The immediate determinants of investment spending are the:
A) expected rate of return on capital goods and the real interest rate.
B) level of saving and the real interest rate.
C) marginal propensity to consume and the real interest rate.
D) interest rate and the expected price level.

117. The investment-demand curve suggests:
A) that changes in the real interest rate will not affect the amount invested.
B) there is an inverse relationship between the real rate of interest and the level of investment spending.
C) that an increase in business taxes will tend to stimulate investment spending.
D) there is a direct relationship between the real rate of interest and the level of investment spending.
118. Assume there are no prospective investment projects (I) that will yield an expected rate of return (r) of 25 percent or more, but that there are $5 billion of investment opportunities with an expected rate of return between 20 and 25 percent, an additional $5 billion between 15 and 20 percent, and so on. The investment-demand curve for this economy is:

<table>
<thead>
<tr>
<th>r</th>
<th>I</th>
<th>r</th>
<th>I</th>
<th>r</th>
<th>I</th>
</tr>
</thead>
<tbody>
<tr>
<td>25%</td>
<td>$10</td>
<td>25%</td>
<td>$0</td>
<td>20%</td>
<td>$10</td>
</tr>
<tr>
<td>20</td>
<td>15</td>
<td>15</td>
<td>5</td>
<td>20</td>
<td>20</td>
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<tr>
<td>15</td>
<td>20</td>
<td>20</td>
<td>10</td>
<td>30</td>
<td>15</td>
</tr>
<tr>
<td>10</td>
<td>25</td>
<td>10</td>
<td>15</td>
<td>5</td>
<td>40</td>
</tr>
<tr>
<td>5</td>
<td>30</td>
<td>5</td>
<td>20</td>
<td>0</td>
<td>50</td>
</tr>
<tr>
<td>0</td>
<td>35</td>
<td>0</td>
<td>25</td>
<td>0</td>
<td>30</td>
</tr>
</tbody>
</table>

119. In view of your answer to the previous question, if the real interest rate is 15 percent in this economy, the aggregate amount of investment will be:
A) $25.
B) $20.
C) $15.
D) $10.

120. If business taxes are reduced and the real interest rate increases:
A) consumption and saving will necessarily increase.
B) the level of investment spending might either increase or decrease.
C) the level of investment spending will necessarily increase.
D) the level of investment spending will necessarily decrease.

121. Other things equal, a 10 percent decrease in corporate income taxes will:
A) decrease the market price of real capital goods.
B) have no effect on the location of the investment-demand curve.
C) shift the investment-demand curve to the right.
D) shift the investment-demand curve to the left.

122. The investment-demand curve will shift to the right as the result of:
A) the availability of excess production capacity.
B) an increase in business taxes.
C) businesses becoming more optimistic about future business conditions.
D) an increase in the real interest rate.

123. Other things equal, the real interest rate and the level of investment are:
A) related only when saving equals planned investment.
B) unrelated.
C) inversely related.
D) directly related.

Use the following to answer questions 124-125:

Answer the next question(s) on the basis of the following table:
### Amount of Investment with This Expected Rate of Return or Higher (Billions)

<table>
<thead>
<tr>
<th>Expected Rate of Return</th>
<th>Amount of Investment (Billions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>12%</td>
<td>$10</td>
</tr>
<tr>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>8</td>
<td>30</td>
</tr>
<tr>
<td>6</td>
<td>40</td>
</tr>
<tr>
<td>4</td>
<td>50</td>
</tr>
<tr>
<td>2</td>
<td>60</td>
</tr>
</tbody>
</table>

124. The above table reflects a(n):
   A) interest rate schedule.
   B) demand-for-money schedule.
   C) investment-demand schedule.
   D) profit schedule.

125. The above schedule indicates that if the real interest rate is 8 percent, then:
   A) we cannot tell what volume of investment will be profitable.
   B) $30 billion will be both saved and invested.
   C) $30 billion of investment will be undertaken.
   D) $60 billion of investment will be undertaken.

126. Other things equal, if the real interest rate falls and business taxes rise:
   A) investment will rise until it is equal to saving.
   B) we will be uncertain as to the resulting change in investment.
   C) we can be certain that investment will rise.
   D) we can be certain that investment will fall.

127. The investment-demand curve will shift to the right as a result of:
   A) an increase in the excess production capacity available in industry.
   B) an increase in business taxes.
   C) technological progress.
   D) an increase in the acquisition and maintenance cost of capital goods.

128. The investment-demand curve will shift to the left as a result of:
   A) an increase in the excess production capacity available in industry.
   B) a decrease in business taxes.
   C) increased business optimism with respect to future economic conditions.
   D) a decrease in labor costs.

129. If the real interest rate in the economy is $i$ and the expected rate of return from additional investment is $r$, then more investment will be forthcoming when:
   A) $r$ falls.
   B) $i$ is greater than $r$.
   C) $r$ is greater than $i$.
   D) $i$ rises.

130. A rightward shift of the investment-demand curve might be caused by:
A) an increase in the price level.
B) a decline in the real interest rate.
C) an increase in the expected rate of return on investment.
D) an increase in business taxes.

131. The real interest rate is:
A) the percentage increase in money that the lender receives on a loan.
B) the percentage increase in purchasing power that the lender receives on a loan.
C) also called the after-tax interest rate.
D) usually higher than the nominal interest rate.

132. When we draw an investment demand curve we hold constant all of the following except:
A) the expected rate of return on the investment.
B) business taxes.
C) the interest rate.
D) the present stock of capital goods.

133. If the nominal interest rate is 18 percent and the real interest rate is 6 percent, the inflation rate is:
A) 18 percent.
B) 24 percent.
C) 12 percent.
D) 6 percent.

134. If the inflation rate is 10 percent and the real interest rate is 12 percent, the nominal interest rate is:
A) 2 percent.
B) zero percent.
C) 10 percent.
D) 22 percent.

135. A high rate of inflation is likely to cause a:
A) high nominal interest rate.
B) low nominal interest rate.
C) low rate of growth of nominal GDP.
D) decrease in nominal wages.

136. If the real interest rate in the economy is \( i \) and the expected rate of return on additional investment is \( r \), then other things equal:
A) more investment will be forthcoming when \( i \) exceeds \( r \).
B) less investment will be forthcoming when \( r \) rises.
C) \( r \) will fall as more investment is undertaken.
D) \( r \) will exceed \( i \) at all possible levels of investment.

137. If the real interest rate in the economy is \( i \) and the expected rate of return on additional investment is \( r \), then other things equal:
A) investment will take place until \( i \) and \( r \) are equal.
B) investment will take place until \( r \) exceeds \( i \) by the greatest amount.
C) \( r \) will rise as more investment is undertaken.
D) \( i \) will fall as more investment is undertaken.
138. Assume that for the entire business sector of a private closed economy there is $0 worth of investment projects that will yield an expected rate of return of 25 percent or more. But there are $15 worth of investments that will yield an expected rate of return of 20-25 percent; another $15 with an expected rate of return of 15-20 percent; and similarly an additional $15 of investment projects in each successive rate of return range down to and including the 0-5 percent range.

Which of the lines on the above diagram represents these data?
A) A  
B) B  
C) C  
D) D

Use the following to answer questions 139-141:

Answer the next question(s) on the basis of the following information for a private closed economy.
Assume that for the entire business sector of the economy there is $0 worth of investment projects that will yield an expected rate of return of 25 percent or more. But there are $15 worth of investments that will yield an expected rate of return of 20-25 percent; another $15 with an expected rate of return of 15-20 percent; and similarly an additional $15 of investment projects in each successive rate of return range down to and including the 0-5 percent range.

139. Refer to the above information. If the real interest rate is 15 percent, what amount of investment will be undertaken?
A) $15  
B) $30  
C) $45  
D) $60

140. Refer to the above information. If the real interest rate is 5 percent, what amount of investment will be undertaken?
A) $15  
B) $30  
C) $45  
D) $60

141. Refer to the above information. The expected rate of return curve:
A) shows a direct relationship between the interest rate and investment. 
B) is also the investment-demand curve. 
C) is indeterminant.
D) implies a direct (positive) relationship between the interest rate and the level of GDP.

Investment schedule

142. The relationship between investment and GDP is shown by the:
   A) consumption of fixed capital schedule.
   B) saving schedule.
   C) investment schedule.
   D) consumption schedule.

143. In the aggregate expenditures model, it is assumed that investment:
   A) automatically changes in response to changes in the current level of real GDP.
   B) changes by less in percentage terms than changes in the level of real GDP.
   C) does not respond to changes in interest rates.
   D) does not change when the level of real GDP changes.

144. In comparison with the consumption schedule, the investment schedule is:
   A) relatively stable.
   B) relatively unstable.
   C) upsloping.
   D) independent of the price level.

145. Which of the following will cause the investment schedule to shift downward?
   A) an increase in the real interest rate
   B) a decline in wage rates
   C) a significant decline in the real interest rate
   D) a new technological advance that cuts the price of steel by one-half

146. All else equal, a large decline in the real interest rate will shift the:
   A) investment-demand curve leftward.
   B) investment-demand curve rightward.
   C) investment schedule upward.
   D) investment schedule downward.

Use the following to answer questions 147-152:
147. Refer to the above diagrams. Curve A:
   A) is an investment schedule and curve B is a consumption of fixed capital schedule.
   B) is an investment demand curve and curve B is an investment schedule.
   C) and B are totally unrelated.
   D) shifts to the left when curve B shifts upward.

148. Refer to the above diagrams. Other things equal, Curve B will shift upward when:
   A) the level of GDP increases.
   B) the interest rate increases.
   C) curve A shifts to the left.
   D) curve A shifts to the right.

149. Refer to the above diagrams. Other things equal, an interest rate decrease will:
   A) shift curve A to the right and shift curve B upward.
   B) shift curve A to the left and shift curve B downward.
   C) leave curve A in place but shift curve B downward.
   D) leave curve A in place but shift curve A upward.

150. Refer to the above diagrams. Other things equal, an interest rate increase will:
   A) shift curve A to the right and shift curve B upward.
   B) shift curve A to the left and shift curve B downward.
   C) leave curve A in place but shift curve B downward.
   D) leave curve A in place but shift curve A upward.

151. Refer to the above diagram. Other things equal, an interest rate decrease coupled with a rightward shift in curve A will:
   A) shift curve B upward.
   B) shift curve B downward.
   C) have no effect on curve B.
   D) reduce GDP.

152. Refer to the above diagram. The location of curve B depends on the:
   A) level of real GDP.
   B) location of curve A only.
   C) interest rate only.
   D) interest rate together with the location of curve A.

153. Which of the following is the primary explanation for historical changes in real GDP?
   A) changes in net exports
   B) changes in the marginal propensity to consume
   C) abrupt changes in stock market prices
   D) changes in investment expenditures

**Equilibrium GDP in private closed economy**

154. The level of aggregate expenditures in the private closed economy is determined by the:
   A) expenditures of consumers and businesses.
   B) intersection of the saving schedule and the 45-degree line.
C) equality of the MPC and MPS.
D) intersection of the saving and consumption schedules.

Use the following to answer questions 155-157:

Answer the next question(s) on the basis of the following data for a private closed economy.

Possible levels of domestic output and income (GDP = DI)

<table>
<thead>
<tr>
<th>Consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>$320</td>
</tr>
<tr>
<td>330</td>
</tr>
<tr>
<td>340</td>
</tr>
<tr>
<td>350</td>
</tr>
<tr>
<td>360</td>
</tr>
<tr>
<td>370</td>
</tr>
<tr>
<td>380</td>
</tr>
</tbody>
</table>

| $320 | $320 |
|-------------------|
| 327 |
| 334 |
| 341 |
| 348 |
| 355 |
| 362 |

155. Refer to the above data. The MPS is:
A) 7/10.
B) 3/10.
C) 2/5.
D) 3/5.

156. Refer to the above data. At the $370 billion level of DI the APS is approximately:
A) 4 percent.
B) 7 percent.
C) 1 percent.
D) 16 percent.

157. Refer to the above data. If gross investment is $12 billion, the equilibrium level of GDP will be:
A) $380.
B) $370.
C) $360.
D) $350.

Use the following to answer questions 158-161:
158. Refer to the above diagram for a private closed economy. The equilibrium level of GDP is:
   A) $400.
   B) $300.
   C) $200.
   D) $100.

159. Refer to the above diagram for a private closed economy. At the equilibrium level of GDP, investment and saving are both:
   A) $50.
   B) $100.
   C) $20.
   D) $40.

160. Refer to the above diagram for a private closed economy. The $400 level of GDP is:
   A) that output at which saving is zero.
   B) too high because consumption exceeds investment.
   C) unstable because aggregate expenditures exceed GDP.
   D) unstable because aggregate expenditures are less than GDP.

161. Refer to the above diagram for a private closed economy. Unplanned changes in inventories will be zero:
   A) only at the $300 level of GDP.
   B) only at the $200 level of GDP.
   C) at all levels of GDP.
   D) only at the $400 level of GDP.

Use the following to answer questions 162-165:
162. Refer to the above diagram that applies to a private closed economy. The APC is equal to 1 at income level:  
A) J.  
B) M.  
C) H.  
D) G.

163. Refer to the above diagram that applies to a private closed economy. If aggregate expenditures are \( C + I_{g2} \), the amount of saving at income level J is:  
A) LK.  
B) KN.  
C) KD.  
D) JD.

164. Refer to the above diagram that applies to a private closed economy. The slope of the consumption schedule in this figure reveals that the:  
A) MPS rises as income rises.  
B) MPC is constant.  
C) APC is constant.  
D) APC increases as income increases.

165. Refer to the above diagram that applies to a private closed economy. If gross investment is \( I_{g1} \), the equilibrium GDP and the level of consumption will be:  
A) H and HB respectively.  
B) J and JJ respectively.  
C) J and JK respectively  
D) H and HF respectively.

166. Other things equal, the slope of the aggregate expenditures schedule will increase as a result of:  
A) a decline in the size of the inflationary gap.  
B) an increase in the MPC.  
C) an increase in the MPS.  
D) a decline in the general price level.

167. The equilibrium level of GDP in a private closed economy is where:
A) MPC = APC.
B) unemployment is about 3 percent of the labor force.
C) consumption equals saving.
D) aggregate expenditures equal GDP.

168. In a private closed economy, when aggregate expenditures equal GDP:
A) consumption equals investment.
B) consumption equals aggregate expenditures.
C) planned investment equals saving.
D) disposable income equals consumption minus saving.

169. In a private closed economy, when aggregate expenditures exceed GDP:
A) GDP will decline.
B) business inventories will rise.
C) saving will decline.
D) business inventories will fall.

170. If an unintended increase in business inventories occurs at some level of GDP, then GDP:
A) entails a rate of aggregate expenditures in excess of the rate of aggregate production.
B) may be either above or below the equilibrium output.
C) is too low for equilibrium.
D) is too high for equilibrium.

171. The equilibrium level of GDP is associated with:
A) an excess of planned investment over saving.
B) no unintended changes in inventories.
C) an unintended decrease in business inventories.
D) an unintended increase in business inventories.

172. Which aggregate expenditure schedule AE in the above diagram for a private closed economy implies the largest MPC?
A) AE$_4$
B) AE$_3$
C) AE$_2$
D) AE$_1$
173. If at some level of GDP the economy is experiencing an unintended decrease in inventories:
   A) the aggregate level of saving will decline.
   B) the price level will fall.
   C) the business sector will lay off workers.
   D) domestic output will increase.

174. The equilibrium GDP is the level of domestic output:
   A) where consumption equals saving.
   B) where actual investment equals consumption.
   C) which is sustainable.
   D) where full employment exists.

175. If an unintended increase in business inventories occurs:
   A) we can expect aggregate production to be unaffected.
   B) we can expect businesses to increase the level of production.
   C) we can expect businesses to lower the level of production.
   D) aggregate expenditures must exceed the domestic output.

176. Assume that in a private closed economy consumption is $240 billion and investment is $50 billion, both at the $280 billion level of domestic output. Thus:
   A) saving is $10 billion.
   B) unplanned decreases in inventories of $10 billion will occur.
   C) the MPC is .80.
   D) unplanned increases in inventories of $10 billion will occur.

177. A private closed economy will expand when:
   A) actual GDP is less than potential GDP.
   B) unplanned decreases in inventories occur.
   C) aggregate expenditures are less than GDP.
   D) unplanned increases in inventories occur.

178. If aggregate expenditures exceed GDP in a private closed economy:
   A) leakages will exceed injections.
   B) planned investment will exceed saving.
   C) unplanned investment in inventories will occur.
   D) saving will exceed planned investment.

179. For a private closed economy, an unintended decline in inventories suggests that:
   A) aggregate expenditures are less than the business sector expected them to be.
   B) aggregate expenditures exceed GDP.
   C) actual investment exceeds saving.
   D) planned investment is greater than consumption.

Use the following to answer questions 180-183:
180. Refer to the above diagram for a private closed economy. The equilibrium GDP in this economy:
   A) is $60 billion.
   B) is $180 billion.
   C) is between $60 and 180 billion.
   D) is $60 billion at all levels of GDP.

181. Refer to the above diagram for a private closed economy. In this economy investment:
   A) decreases as GDP increases.
   B) increases as GDP increases.
   C) is $40 billion at all levels of GDP.
   D) is $60 billion at all levels of GDP.

182. Refer to the above diagram for a private closed economy. In this economy aggregate expenditures:
   A) do not change as GDP increases.
   B) increase by $2 for every $5 increase in GDP.
   C) increase by $2 for every $4 increase in GDP.
   D) increase by $2 for every $3 increase in GDP.

183. Refer to the above diagram for a private closed economy. Aggregate saving in this economy will be zero when:
   A) $C + I_g$ cuts the 45-degree line.
   B) GDP is $180 billion.
   C) GDP is $60 billion.
   D) GDP is also zero.

184. For a private closed economy aggregate expenditures consist of:
   A) $C + I_g$.
   B) $C - I_g$.
   C) $C + S$.
   D) $C - S$. 
(Advanced analysis) Answer the next question(s) on the basis of the following consumption and investment data for a private closed economy. Figures are in billions of dollars.

\[ C = 60 + .6Y \]
\[ I = I_0 = 30 \]

185. Refer to the above data. The equilibrium level of income \((Y)\) is:
   A) 360.
   B) 225.
   C) 200.
   D) 135.

186. Refer to the above data. In equilibrium the level of consumption spending will be:
   A) 170.
   B) 270.
   C) 160.
   D) 195.

187. Refer to the above data. In equilibrium the level of saving will be:
   A) 30.
   B) 26.
   C) 25.
   D) 60.

(Advanced analysis) Answer the next question(s) on the basis of the following data. The letters \(Y\), \(C\), \(S\), and \(I\) are used to represent GDP, consumption, saving, and investment respectively.

<table>
<thead>
<tr>
<th>GDP ((Y))</th>
<th>Consumption ((C))</th>
<th>Investment ((I))</th>
</tr>
</thead>
<tbody>
<tr>
<td>$0</td>
<td>$60</td>
<td>$30</td>
</tr>
<tr>
<td>100</td>
<td>120</td>
<td>40</td>
</tr>
<tr>
<td>200</td>
<td>180</td>
<td>50</td>
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<td>300</td>
<td>240</td>
<td>60</td>
</tr>
<tr>
<td>400</td>
<td>300</td>
<td>70</td>
</tr>
<tr>
<td>500</td>
<td>360</td>
<td>80</td>
</tr>
</tbody>
</table>

188. The equation representing the consumption schedule for the above economy is:
   A) \(C = Y - .6S\).
   B) \(Y = C + S\).
   C) \(C = 60 + .4Y\).
   D) \(C = 60 + .6Y\).

189. The equation representing the investment schedule for the above economy is:
   A) \(I = .3Y\).
B) \( I = 80 - 0.3Y \).
C) \( I = 30 + 0.1Y \).
D) \( I = I_0 = 30 \).

190. Refer to the above data. Equilibrium \( Y \) (= GDP) is:

A) $100.
B) $200.
C) $300.
D) $400.

191. When investment remains the same at each level of GDP in a private closed economy, the slope of the aggregate expenditures schedule:

A) exceeds the MPC.
B) is less than the MPC.
C) equals the MPS.
D) equals the MPC.

192. Actual investment is $62 billion at an equilibrium output level of $620 billion in a private closed economy. The average propensity to save at this level of output is:

A) 0.10.
B) 0.10.
C) 0.62.
D) 0.84.

Use the following to answer questions 193-198:

![Diagram of C+Ig and C curves with GDP on the x-axis and C+Ig on the y-axis. The 45-degree line intersects the C+Ig curve at $100 GDP.]

193. Refer to the above diagram for a private closed economy. The MPC and MPS:

A) are 0.6 and 0.4 respectively.
B) are 0.7 and 0.3 respectively.
C) are both 0.5.
D) are both 0.7.

194. Refer to the above diagram for a private closed economy. Gross investment:
A) is positively related to the level of GDP.
B) is negatively related to the level of GDP.
C) is independent of the level of GDP.
D) must be subtracted from consumption to determine aggregate expenditures.

195. Refer to the above diagram for a private closed economy. At the $200 level of GDP:
A) consumption is $200 and planned investment is $50 so that aggregate expenditures are $250.
B) consumption is $200 and planned investment is $100 so that aggregate expenditures are $300.
C) consumption is $250 and actual investment is $50 so that aggregate expenditures are $300.
D) aggregate expenditures fall short of GDP with the result that GDP will decline.

196. Refer to the above diagram for a private closed economy. At the $400 level of GDP:
A) aggregate expenditures exceed GDP with the result that GDP will rise.
B) consumption is $350 and planned investment is zero so that aggregate expenditures are $350.
C) consumption is $300 and planned investment is $50 so that aggregate expenditures are $350.
D) consumption is $300 and actual investment is $100 so that aggregate expenditures are $400.

197. Refer to the above diagram for a private closed economy. At the $300 level of GDP:
A) aggregate expenditures and GDP are equal.
B) consumption is $200 and planned investment is $50.
C) saving exceeds planned investment.
D) consumption plus saving is $400.

198. Refer to the above diagram for a private closed economy. At the equilibrium level of GDP the APC and APS:
A) are 5/6 and 1/6 respectively.
B) are equal to the MPC and MPS respectively.
C) are 4/5 and 1/5 respectively.
D) cannot be determined from the information given.

199. If unintended increases in business inventories occur, we can expect:
A) a decline in GDP and rising unemployment.
B) inflation.
C) an increase in consumption.
D) an offsetting increase in planned investment.

Use the following to answer questions 200-202:

(Advanced analysis) Answer the next question(s) on the basis of the following information for a private closed economy, where \( I_g \) is gross investment, \( S \) is saving, and \( Y \) is gross domestic product (GDP).

\[
I_g = I_g = 80
\]
\[
S = -80 + .4Y
\]

200. Refer to the above information. The equilibrium GDP will be:
A) $160.
B) $400.
C) $360.
D) $480.
201. Refer to the above information. In equilibrium consumption will be:
   A) $400.
   B) $280.
   C) $320.
   D) $360.

202. Refer to the above information. In equilibrium saving will be:
   A) $40.
   B) $120.
   C) $60.
   D) $80.

Use the following to answer questions 203-205:

(Advanced analysis) Answer the next question(s) on the basis of the following information for a private closed economy.

\[ S = -20 + 0.4Y \]
\[ I_g = 25 - 3i \]

where \( S \) is saving, \( I_g \) is gross investment, \( i \) is the real interest rate, and \( Y \) is GDP.

203. Refer to the above information. If the real interest rate is 5 percent, investment will be:
   A) $10 and the equilibrium GDP will be $75.
   B) $15 and the equilibrium GDP will be $100.
   C) $10 and the equilibrium GDP will be $120.
   D) $15 and the equilibrium GDP will be $180.

204. Refer to the above information. In equilibrium the level of saving will be:
   A) $10.
   B) $15.
   C) $20.
   D) $30.

205. Refer to the above information. In equilibrium the level of consumption will be:
   A) $80.
   B) $95.
   C) $65.
   D) $70.

206. In a private closed economy ______ investment is equal to saving at all levels of GDP and equilibrium occurs only at that
level of GDP where ______ investment is equal to saving.
   A) planned; actual
   B) actual; planned
   C) gross; net
   D) net; gross
207. (Advanced analysis) If \( S = -60 + .25Y \) and \( I_g = I_g = 60 \), where \( S \) is saving, \( I_g \) is gross investment, and \( Y \) is gross domestic product (GDP), then the equilibrium level of GDP is:
   A) $200.
   B) $320.
   C) $360.
   D) $480.

208. In the aggregate expenditures model, equilibrium GDP in a private closed economy is indicated by:
   A) the equality of saving and planned investment.
   B) the intersection of aggregate expenditures and the 45-degree line.
   C) the absence of unplanned changes in inventories.
   D) all of the above.

209. In the aggregate expenditures model, technological progress will shift the investment schedule:
   A) downward and increase aggregate expenditures.
   B) downward and decrease aggregate expenditures.
   C) upward and increase aggregate expenditures.
   D) upward and decrease aggregate expenditures.

210. In the aggregate expenditures model, the level of GDP moves toward an equilibrium because:
   A) the investment schedule is steeper than the saving schedule.
   B) the 45-degree line is steeper than the aggregate expenditures schedule.
   C) the saving schedule is steeper than the consumption schedule.
   D) wages and prices are flexible downward.

211. At equilibrium real GDP in a private closed economy:
   A) the MPC must equal the APC.
   B) the slope of the aggregate expenditures schedule equals the MPS.
   C) aggregate expenditures and real GDP are equal.
   D) planned saving and consumption are equal.

Use the following to answer questions 212-213:

(Advanced analysis) Answer the next question(s) on the basis of the following information for a private closed economy where \( C \) is consumption, \( Y \) is the gross domestic product, \( I_g \) is gross investment, and \( i \) is the interest rate:

\[
C = 40 + .8Y
\]
\[
I_g = 60 - 2i
\]
\[
i = i = 10
\]

212. Refer to the above information. Given that the interest rate is 10 (percent), the amount that businesses will want to invest will be:
   A) $58.
   B) $60.
   C) $40.
   D) $20.
213. Refer to the above information. The equilibrium level of GDP in this economy is:
   A) $240.
   B) $300.
   C) $360.
   D) $400.

214. What will be the effect of an excess of planned investment over saving in a private closed economy with unemployed resources?
   A) a decline in the rate of interest
   B) an unintended accumulation of inventories by businesses
   C) a rise in the real GDP
   D) the Federal budget will automatically move toward a deficit

215. Which of the following statements is correct for a private closed economy?
   A) Saving equals planned investment only at the equilibrium level of GDP.
   B) All levels of GDP where planned investment exceeds saving will be too high for equilibrium.
   C) Planned and actual investment are identical at all possible levels of GDP.
   D) Saving equals actual investment only at the equilibrium level of GDP.

216. At the $180 billion equilibrium level of income, saving is $38 billion in a private closed economy. Planned investment must be:
   A) $138 billion.
   B) $126 billion.
   C) $38 billion.
   D) $180 billion.

217. In which of the following situations for a private closed economy will the level of GDP expand?
   A) when planned investment exceeds saving
   B) when planned investment exceeds consumption
   C) when saving exceeds consumption
   D) when consumption exceeds investment

218. Planned investment plus unintended increases in inventories equals:
   A) actual investment.
   B) consumption of fixed capital.
   C) consumption minus saving.
   D) unintended saving.

219. Saving is always equal to:
   A) planned investment less unintended increases in inventories.
   B) actual investment.
   C) planned investment.
   D) unintended changes in inventories.

220. Actual investment may be defined as:
   A) gross investment less replacement investment.
   B) the ratio of planned investment to unintended increases in inventories.
   C) unintended increases in inventories less planned investment.
   D) planned investment plus unintended increases in inventories.
221. Actual investment equals saving:
   A) at all levels of GDP.
   B) at all below-equilibrium levels of GDP.
   C) at all above-equilibrium levels of GDP.
   D) only at the equilibrium GDP.

222. Planned investment equals saving:
   A) at all levels of GDP.
   B) at all below-equilibrium levels of GDP.
   C) at all above-equilibrium levels of GDP.
   D) only at the equilibrium GDP.

223. That the economy has achieved aggregate equilibrium is indicated by:
   A) an equality of saving and planned investment.
   B) an equality of aggregate expenditures and GDP.
   C) the absence of unplanned changes in inventories.
   D) all of the above.

224. Unintended changes in inventories:
   A) cause the economy to move away from the equilibrium GDP.
   B) are treated as components of consumption.
   C) bring actual investment and saving into equality only at the equilibrium level of GDP.
   D) bring actual investment and saving into equality at all levels of GDP.

225. Investment and saving are, respectively:
   A) income and wealth.
   B) stocks and flows.
   C) injections and leakages.
   D) leakages and injections.

**Last Word Questions**

226. (Last Word) According to classical economists:
   A) demand creates its own supply.
   B) wages and prices are inflexible downward.
   C) the market system ensures full employment.
   D) Say's law is invalid.

227. (Last Word) Say's law indicates that:
   A) a stable, inflexible interest rate will guarantee perpetual full employment.
   B) falling prices will decrease the purchasing power of a declining level of total money demand.
   C) supply creates its own demand.
   D) prices which rise most during prosperity are likely to fall least during depression.

228. (Last Word) Say's law and classical macroeconomics were disputed by:
   A) Adam Smith.
B) Jeremy Bentham.
C) John Stuart Mill.
D) John Maynard Keynes.

229. (Last Word) Classical macroeconomics was dealt severe blows by:
   A) the Great Depression and Keynes's macroeconomic theory.
   B) the Second World War and the writings of Milton Friedman.
   C) Adam Smith and his idea of the invisible hand.
   D) the strong recovery after the Second World War and Alvin Hansen's stagnation thesis.

   A) Adam Smith stated his idea of the invisible hand.
   B) Thorstein Veblen poked fun at the leisure class.
   C) John Maynard Keynes attacked the classical economist's contention that recession or depression will automatically cure itself.
   D) J. B. Say developed "Say's law."

**True/False Questions**

231. Rising stock market prices will tend to shift the investment schedule upward.

232. If we ignore government, depreciation, and net foreign factor income earned in the United States, and assume that all saving is personal saving, GDP will equal DI.

233. If DI is $275 billion and the APC is 0.8, we can conclude that saving is $55 billion.

234. If the MPC is constant at various levels of income, then the APC must also be constant at all of those income levels.

235. The average propensity to consume is defined as income divided by consumption.

236. \[1 - \text{MPC} = \text{MPS}.\]

237. A decline in the real interest rate will shift the investment schedule downward.

238. If the Brown family's marginal propensity to consume is 0.70, then it will necessarily consume seven-tenths of its total income.

239. \[1 + \text{MPS} = \text{MPC}.\]

240. The slope of the consumption schedule is measured by the MPC.
241. A specific investment will be undertaken if the expected rate of return, \( r \), exceeds the interest rate, \( i \).

242. The investment schedule relating \( I_g \) to real GDP is highly stable; it rarely shifts positions.