Practice with APC, APS, MPC and MPS

Part A
Average Propensities

The *average propensity to consume* (APC) is the ratio of consumption expenditures (C) to disposable income (DI), or APC = C / DI.

The *average propensity to save* (APS) is the ratio of savings (S) to disposable income, or APS = S / DI.

1. Using the data in Figure 20.1, calculate the APC and APS at each level of disposable income given. The first calculation is completed as an example.

Figure 20.1
Average Propensities to Consume and to Save

Disposable Income	Consumption	Saving	APC	APS
$0	$2,000	–$2,000	—	—
2,000	3,600	–1,600	1.8	–0.8
4,000	5,200	–1,200		
6,000	6,800	–800		
8,000	8,400	–400		
10,000	10,000	0		
12,000	11,600	400		

2. How can savings be negative? Explain.

Part B
Marginal Propensities

The *marginal propensity to consume* (MPC) is the change in consumption divided by the change in disposable income. It is a fraction of any change in DI that is spent on consumer goods: MPC = ΔC / ΔDI.

The *marginal propensity to save* (MPS) is the fraction saved of any change in disposable income. The MPS is equal to the change in saving divided by the change in DI: MPS = ΔS / ΔDI.

3. Using the data in Figure 20.2, calculate the MPC and MPS at each level of disposable income. The first calculation is completed as an example. (This is not a typical consumption function. Its purpose is to provide practice in calculating MPC and MPS.)

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Figure 20.2
Marginal Propensities to Consume and to Save

Disposable Income	Consumption	Saving	MPC	MPS
$12,000	$12,100	–$100	—	—
13,000	13,000	0	0.90	0.10
14,000	13,800	200		
15,000	14,500	500		
16,000	15,100	900		
17,000	15,600	1,400		

4. Why must the sum of MPC and MPS always equal 1?

Part C

Figure 20.3
Changes in APC and MPC as DI Increases

Disposable Income	Consumption	Savings	APC	APS	MPC	MPS
$10,000	$12,000	–$2,000			—	—
20,000	21,000	–1,000				
30,000	30,000	0				
40,000	39,000	1,000				
50,000	48,000	2,000				
60,000	57,000	3,000				
70,000	66,000					

5. Complete Figure 20.3, and answer the questions based on the completed table.
6. What is the APC at a DI level of $10,000? _______ At $20,000? _______
7. What happens to the APC as DI rises? _______________________
8. What is the MPC as DI goes from $50,000 to $60,000? ______ From $60,000 to $70,000? ______
9. What happens to MPC as income rises? ___________________________ What happens to MPS as income rises? ___________________________
10. What is the conceptual difference between APC and MPC?

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