Consumption
Problem Solutions

	(1)
(1) Initial Assets	0
(2) Interest Income	0
(3) Financial Net Worth	0
(4) Wage Income	0
(5) PV of Wage Income	200,000
(6) Wealth	200,000
(7) Consumption	50,000
(8) Net Income	0
(9) Saving	50,000
(10) Assets, End of Period	50,000

A Problem

Period	Wage Rate	
1	0	r=100%
2	200,000	
3	400,000	
4	0	

Period One Calculations

	(1)
(1) Initial Assets	0
(2) Interest Income	0
(3) Financial Net Worth	0
(4) Wage Income	0
(5) PV of Wage Income	200,000
(6) Wealth	200,000
(7) Consumption	50,000
(8) Net Income	0
(9) Saving	50,000
(10) Assets, End of Period	50,000

Period One Calculations

	(1)
(1) Initial Assets	0
(2) Interest Income	0
(3) Financial Net Worth	0
(4) Wage Income	0
(5) PV of Wage Income	200,000
(6) Wealth	200,000
(7) Consumption	50,000
(8) Net Income	0
(9) Saving	50,000
(10) Assets, End of Period	50,000

$$z = \frac{1}{1+1}200,000 + \frac{1}{(1+1)^2}400,000$$

Period One Calculations

	(1)
(1) Initial Assets	0
(2) Interest Income	0
(3) Financial Net Worth	0
(4) Wage Income	0
(5) PV of Wage Income	200,000
(6) Wealth	200,000
(7) Consumption	50,000
(8) Net Income	0
(9) Saving	50,000
(10) Assets, End of Period	50,000

$$c = \frac{1}{4}z$$

Period One Calculations

	(1)
(1) Initial Assets	0
(2) Interest Income	0
(3) Financial Net Worth	0
(4) Wage Income	0
(5) PV of Wage Income	200,000
(6) Wealth	200,000
(7) Consumption	50,000
(8) Net Income	0
(9) Saving	50,000
(10) Assets, End of Period	50,000

Period One Calculations

	(1)
(1) Initial Assets	0
(2) Interest Income	0
(3) Financial Net Worth	0
(4) Wage Income	0
(5) PV of Wage Income	200,000
(6) Wealth	200,000
(7) Consumption	50,000
(8) Net Income	0
(9) Saving	50,000
(10) Assets, End of Period	50,000

Consumption- Problem Solutions

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Period 2

	(1)	(2)	(3)	(4)
(1) Initial Assets	0	50,000	0	200,000
(2) Interest Income	0	50,000	0	200,000
(3) Financial Net Worth	0	100,000	0	400,000
(4) Wage Income	0	200,000	400,000	0
(5) PV of Wage Income	200,000	400,000	400,000	0
(6) Wealth	200,000	300,000	400,000	400,000
(7) Consumption	50,000	100,000	200,000	400,000
(8) Net Income	0	150,000	400,000	200,000
(9) Saving	50,000	50,000	200,000	200,000
(10) Assets, End of Period	50,000	0	200,000	0

Consumption- Problem Solutions

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Period 2

	(1)	(2)	(3)	(4)
(1) Initial Assets	0	50,000	0	200,000
(2) Interest Income	0	50,000	0	200,000
(3) Financial Net Worth	0	100,000	0	400,000
(4) Wage Income	0	200,000	400,000	0
(5) PV of Wage Income	200,000	400,000	400,000	0
(6) Wealth	200,000	300,000	400,000	400,000
(7) Consumption	50,000	100,000	200,000	400,000
(8) Net Income	0	150,000	400,000	200,000
(9) Saving	50,000	50,000	200,000	200,000
(10) Assets, End of Period	50,000	0	200,000	0

Consumption- Problem Solutions

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Period 2

	(1)	(2)	(3)	(4)
(1) Initial Assets	0	50,000	0	200,000
(2) Interest Income	0	50,000	0	200,000
(3) Financial Net Worth	0	100,000	0	400,000
(4) Wage Income	0	200,000	400,000	0
(5) PV of Wage Income	200,000	400,000	400,000	0
(6) Wealth	200,000	300,000	400,000	400,000
(7) Consumption	50,000	100,000	200,000	400,000
(8) Net Income	0	150,000	400,000	200,000
(9) Saving	50,000	50,000	200,000	200,000
(10) Assets, End of Period	50,000	0	200,000	0

Consumption- Problem Solutions

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Period 3

	(1)	(2)	(3)	(4)
(1) Initial Assets	0	50,000	0	200,000
(2) Interest Income	0	50,000	0	200,000
(3) Financial Net Worth	0	100,000	0	400,000
(4) Wage Income	0	200,000	400,000	0
(5) PV of Wage Income	200,000	400,000	400,000	0
(6) Wealth	200,000	300,000	400,000	400,000
(7) Consumption	50,000	100,000	200,000	400,000
(8) Net Income	0	150,000	400,000	200,000
(9) Saving	50,000	50,000	200,000	200,000
(10) Assets, End of Period	50,000	0	200,000	0

Consumption- Problem Solutions

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Period 3

	(1)	(2)	(3)	(4)
(1) Initial Assets	0	50,000	0	200,000
(2) Interest Income	0	50,000	0	200,000
(3) Financial Net Worth	0	100,000	0	400,000
(4) Wage Income	0	200,000	400,000	0
(5) PV of Wage Income	200,000	400,000	400,000	0
(6) Wealth	200,000	300,000	400,000	400,000
(7) Consumption	50,000	100,000	200,000	400,000
(8) Net Income	0	150,000	400,000	200,000
(9) Saving	50,000	50,000	200,000	200,000
(10) Assets, End of Period	50,000	0	200,000	0

Consumption- Problem Solutions

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Period 4

	(1)	(2)	(3)	(4)
(1) Initial Assets	0	50,000	0	200,000
(2) Interest Income	0	50,000	0	200,000
(3) Financial Net Worth	0	100,000	0	400,000
(4) Wage Income	0	200,000	400,000	0
(5) PV of Wage Income	200,000	400,000	400,000	0
(6) Wealth	200,000	300,000	400,000	400,000
(7) Consumption	50,000	100,000	200,000	400,000
(8) Net Income	0	150,000	400,000	200,000
(9) Saving	50,000	50,000	200,000	200,000
(10) Assets, End of Period	50,000	0	200,000	0

Period 4

	(1)	(2)	(3)	(4)
(1) Initial Assets	0	50,000	0	200,000
(2) Interest Income	0	50,000	0	200,000
(3) Financial Net Worth	0	100,000	0	400,000
(4) Wage Income	0	200,000	400,000	0
(5) PV of Wage Income	200,000	400,000	400,000	0
(6) Wealth	200,000	300,000	400,000	400,000
(7) Consumption	50,000	100,000	200,000	400,000
(8) Net Income	0	150,000	400,000	200,000
(9) Saving	50,000	50,000	200,000	200,000
(10) Assets, End of Period	50,000	0	200,000	0

A Variant

Period	Wage Rate
	0
	200,000
	400,000
	0

r=100%

Our individual expects to receive an $80,000 inheritance in period 4

The Solution

	(1)	(2)	(3)	(4)
(1) Initial Assets	0	52,500	10,000	170,000
(2) Interest Income	0	52,500	10,000	170,000
(3) Financial Net Worth	0	105,000	20,000	340,000
(4) Wage Income	0	200,000	400,000	80,000
(5) PV of Wage Income	210,000	420,000	440,000	0
(6) Wealth	210,000	315,000	420,000	420,000
(7) Consumption	52,500	105,000	210,000	420,000
(8) Net Income	0	147,500	390,000	250,000
(9) Saving	52,500	42,500	180,000	170,000
(10) Assets, End of Period	52,500	10,000	170,000	0

The Solution

	(1)	(2)	(3)	(4)
(1) Initial Assets	0	52,500	10,000	170,000
(2) Interest Income	0	52,500	10,000	170,000
(3) Financial Net Worth	0	105,000	20,000	340,000
(4) Wage Income	0	200,000	400,000	80,000
(5) PV of Wage Income	210,000	420,000	440,000	0
(6) Wealth	210,000	315,000	420,000	420,000
(7) Consumption	52,500	105,000	210,000	420,000
(8) Net Income	0	147,500	390,000	250,000
(9) Saving	52,500	42,500	180,000	170,000
(10) Assets, End of Period	52,500	10,000	170,000	0

End