Wilf Csaplar Jr.   Economics 302   Homework #6   Due 4/02

Do not write your name on the assignment. Write your name only on the back of this
sheet of paper and staple your answers on the front of this sheet of paper. Failure to
follow these directions will cost you 1 point on the assignment.

I will be out of town from the evening of Thursday, 3/27, until the evening of Sunday 3/30
for a conference in St. Louis. Therefore, there will be no class on Friday 3/28.

1) (20 points) Give both an economic and a mathematical explanation of how the length of
the life of capital will affect the elasticity of investment with respect to the interest rate.

2) (15 points) What is the effect an increase in the marginal propensity to invest (MPI) on
the multiplier? Why will it have that effect?

3A) (15 points) Chapter 8 discusses two determinants of investment. The first is the
interest rate and the second is the accelerator. Suppose that investment becomes more
sensitive to interest rates, how is that going to affect the IS/LM diagram? Why will it
have that effect?
3B) (30 points) How will the accelerator affect the IS/LM diagram? Why will it have that
effect? Is the flexible accelerator, i.e. the one with the α, going to have a different effect
upon the diagram than the regular accelerator? If is, then explain what the difference is. If
no, then explain why it will not.

4) (20 points) Suppose that the capital-output ratio is 4, and the depreciation rate is 10%.
After copying the table below onto your answer sheet, use this information to fill it in.
Briefly explain how you calculated each column.

Period	Capital	Output	Replacement Demand	Newly Needed	Total Demand
1	4000	1000		0	
2		1200			
3		1440			
4		1584			
5		1584			

(Note that from year 1 to year 2 and from year 2 to year 3, the output grew 20%. From
year 3 to year 4, it grew 10% and then stayed steady from year 4 to year 5.)