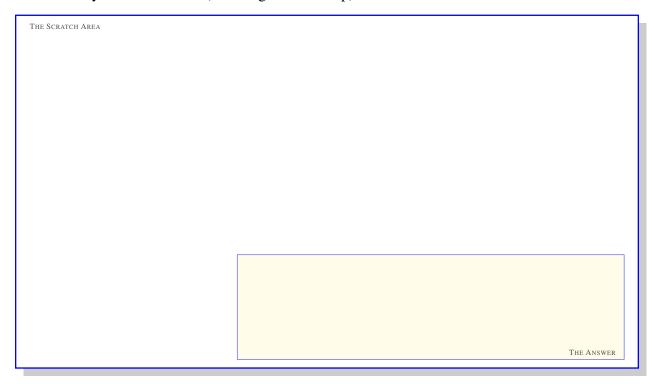
Name:	Marek Rychlik	Student ID:	31415926	
Veek9-templat			Math 468, Spring 202	
	em 4.1) A salesman flies aroune units are trips per month):	nd between Atlanta, Bost	ton, and Chicago as the fol	
	FT	A B C		
	A	-4 2 2		
	B	3 -4 1 5 0 -5		
What is the tra	nsition rate matrix ${f Q}$ for this ${f p}$			
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ast the eigenv	alues of Q as a comma-separa	ned fist.		
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Q 1.

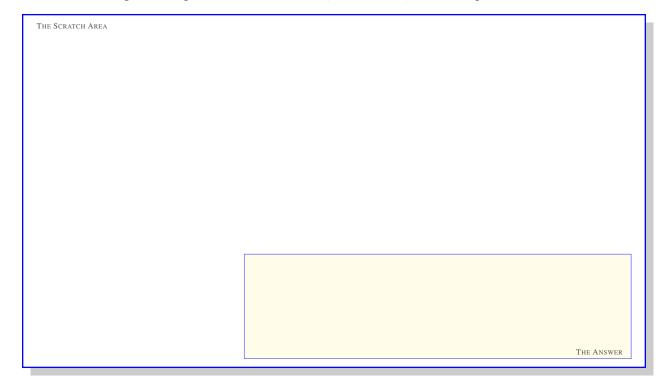
Q 1.1.

Q 1.2.

Q 1.3. Find the (right) diagonalizing matrix S of Q, so that $S^{-1}QS$ is diagonal. Scale the columns so that the first entry in each column (counting from the top) is 1.



 $\bf Q$ 1.4. Find the left diagonalizing matrix $\bf L = \bf S^{-1}$ of $\bf Q$, so that $\bf L \bf Q \bf L^{-1}$ is diagonal.

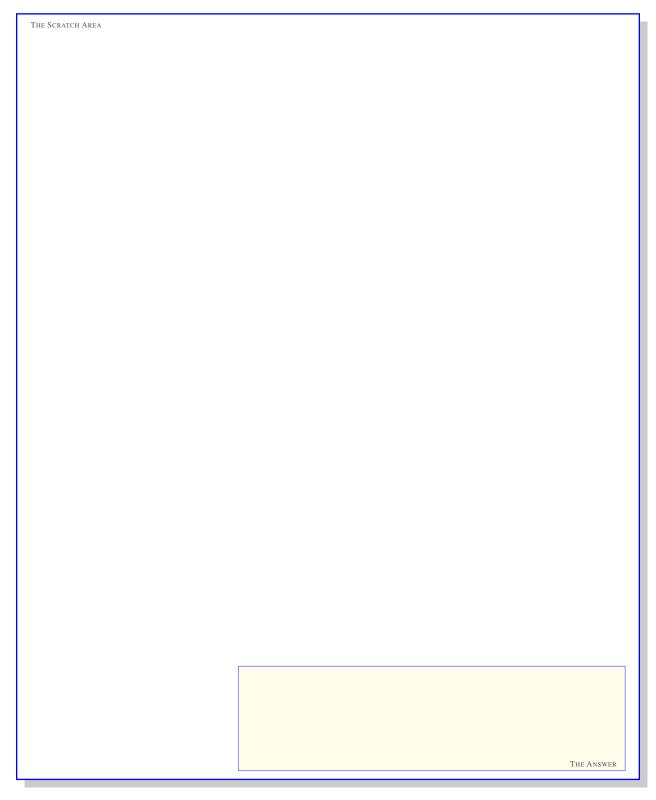


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	Find the limiting fraction of time she spends in each city st the numbers in the order "A, B, C".	y. Only the
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		THE ANS
Find the routing matrix	R for Q.	
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THE SCRATCH AREA		
		Тне А
		11111171
Durrott 4.1 port (b)) W	nat is her average number of trips each year from Boston to	Atlanta
Durrett 4.1, part (0)) W	lat is her average number of trips each year from Boston to	Atlanta
THE SCRATCH AREA		

Q 1.8. If she is in Boston now, what is the probability that the first city she will visit next is Chicago?

Q 1.10. Find the matrix $P(t) = e^{tQ}$.



Q 1.11.	If she is in Boston now, what is the probability that she will be in Atlanta two months from now?
	Your answer must have at least 6 digits of precision.

