Problem 2 Put

r	0.25	u	1.0139641
sigma	0.1	d	0.98622821
K	4.75	p	0.49653318
S0	4.75	1-p	0.50346682
del t	0.01923077		
N	5		
EXP(-rdelt)	0.99520385		

European Put

				5.0209273
			4.95178012	
		4.88358523		4.88358523
	4.8163295		4.8163295	
4.75		4.75		4.75
	4.68458398		4.68458398	
		4.62006885		4.62006885
			4.55644222	
				4.49369183

				0
			0	
		0		0
	0.01634414		0	
0.04846045		0.03261963		0
	0.08059834		0.06510228	
		0.1286878		0.12993115
			0.19262945	
				0.25630817

				0
			0	
		0		0
	-0.24418593		0	
-0.48771453		-0.49415173		0
	-0.73937747		-1	
		-0.99520385		0
			-1	
				0

Buy .488 futures to hedge 1 long put
Sell .488 futures to replicate 1 long put

Problem 2 American Put

r	0.25	u	1.0139641
sigma	0.1	d	0.98622821
K	4.75	p	0.49653318
S0	4.75	1-p	0.50346682
del t	0.01923077		
N	5		
EXP(-rdelt)	0.99520385		

American Put

				5.0209273
			4.95178012	
		4.88358523		4.88358523
	4.8163295		4.8163295	
4.75		4.75		4.75
	4.68458398		4.68458398	
		4.62006885		4.62006885
			4.55644222	
				4.49369183

				0
			0	
		0		0
	0.0164229		0	
0.04885045		0.03277684		0
	0.08129901		0.06541602	
		0.12993115		0.12993115
			0.19355778	
				0.25630817

				0
			0	
		0		0
	-0.24536273		0	
-0.49243499		-0.49653318		0
	-0.74773688		-1	
		-1		0
			-1	
				0

Problem 2 Call

r	0.25	u	1.0139641
sigma	0.1	d	0.98622821
K	4.75	p	0.49653318
S0	4.75	1-p	0.50346682
del t	0.01923077		
N	5		
EXP(-rdelt)	0.99520385		

European Call

				5.0209273
			4.95178012	
		4.88358523		4.88358523
	4.8163295		4.8163295	
4.75		4.75		4.75
	4.68458398		4.68458398	
		4.62006885		4.62006885
			4.55644222	
				4.49369183

				0.2709273
			0.20081235	
		0.13230691		0.13358523
	0.08172382		0.06601137	
0.04846045		0.03261963		0
	0.01611905		0	
		0		0
			0	
				0

				0
			1	
		0.99520385		0
	0.74624476		1	
0.4979659		0.50105212		0
	0.25105322		0	
		0		0
			0	
				0

Sell .48 futures to hedge 1 long call
Sell .48 futures to replicate 1 short call

Problem 1 American Put

r	0.035	u	1.1019403
sigma	0.7	d	0.90749018
K	4.75	p	0.47575091
F0	4.75	1-p	0.52424909
del t	0.01923077		
N	5		
EXP(-rdelt)	0.99932715		

American Put

				7.00367321
			6.35576466	
		5.76779401		5.76779401
	5.23421642		5.23421642	
4.75		4.75		4.75
	4.31057835		4.31057835	
		3.91180752		3.91180752
			3.54992691	
				3.22152381

				0
			0	
		0		0
	0.12060691		0	
0.34473698		0.2302114		0
	0.54857557		0.43942165	
		0.83819248		0.83819248
			1.20007309	
				1.52847619

				0
			0	
		0		0
	-0.22618663		0	
-0.46335104		-0.47575091		0
	-0.72534781		-1	
		-1		0
			-1	
				0

Problem 1 Call

r	0.035	u	1.1019403
sigma	0.7	d	0.90749018
K	4.75	p	0.47575091
F0	4.75	1-p	0.52424909
del t	0.01923077		
N	5		
EXP(-rdelt)	0.99932715		

European Call

				7.00367321
			6.35576466	
		5.76779401		5.76779401
	5.23421642		5.23421642	
4.75		4.75		4.75
	4.31057835		4.31057835	
		3.91180752		3.91180752
			3.54992691	
				3.22152381

				2.25367321
			1.60468422	
		1.01642482		1.01779401
	0.60376543		0.48389062	
0.34435034		0.2300565		0
	0.10937595		0	
		0		0
			0	
				0

				0
			1	
		0.99932715		0
	0.77262031		1	
0.53526321		0.52389635		0
	0.27446739		0	
		0		0
			0	
				0

Sell .535 to Hedge 1 long call
Sell .535 to Replicate 1 short call (note, you want to replicate a short call to hedge a long call)

Problem 2 American Call

r	0.25	u	1.0139641
sigma	0.1	d	0.98622821
K	4.75	p	0.49653318
S0	4.75	1-p	0.50346682
del t	0.01923077		
N	5		
EXP(-rdelt)	0.99520385		

American Call

				5.0209273
			4.95178012	
		4.88358523		4.88358523
	4.8163295		4.8163295	
4.75		4.75		4.75
	4.68458398		4.68458398	
		4.62006885		4.62006885
			4.55644222	
				4.49369183

				0.2709273
			0.20178012	
		0.13358523		0.13358523
	0.08243427		0.0663295	
0.04885045		0.03277684		0
	0.01619673		0	
		0		0
			0	
				0

			1
		1	
	0.75463727		1
0.50276886		0.50346682	
	0.25226312		0
		0	
			0

Problem 1 American Call

r	0.035	u	1.1019403
sigma	0.7	d	0.90749018
K	4.75	p	0.47575091
F0	4.75	1-p	0.52424909
del t	0.01923077		
N	5		
EXP(-rdelt)	0.99932715		

American Call

				7.00367321
			6.35576466	
		5.76779401		5.76779401
	5.23421642		5.23421642	
4.75		4.75		4.75
	4.31057835		4.31057835	
		3.91180752		3.91180752
			3.54992691	
				3.22152381

				2.25367321
			1.60576466	
		1.01779401		1.01779401
	0.60449753		0.48421642	
0.34473698		0.2302114		0
	0.10944959		0	
		0		0
			0	
				0

			1
		1	
	0.77381337		1
0.53597611		0.52424909	
	0.27465219		0
		0	
			0

Problem 1 Put

r	0.035	u	1.1019403
sigma	0.7	d	0.90749018
K	4.75	p	0.47575091
F0	4.75	1-p	0.52424909
del t	0.01923077		
N	5		
EXP(-rdelt)	0.99932715		

European Put

				7.00367321
			6.35576466	
		5.76779401		5.76779401
	5.23421642		5.23421642	
4.75		4.75		4.75
	4.31057835		4.31057835	
		3.91180752		3.91180752
			3.54992691	
				3.22152381

				0
			0	
		0		0
	0.12052576		0	
0.34435034		0.2300565		0
	0.54791119		0.43912598	
		0.8370649		0.83819248
			1.19926562	
				1.52847619

				0
			0	
		0		0
	-0.22603444		0	
-0.46271959		-0.4754308		0
	-0.72418736		-1	
		-0.99932715		0
			-1	
				0

Buy .463 futures to hedge long put
Sell .463 futures to replicate long put