#### Homework Project PSTAT130 David Brackbill davidbrackbill@ucsb.edu

## Frequency of Claims by Age

Analysis Variable : freq		
age	Mean	
+60	0.154003	
-21	0.303724	
21-35	0.250332	
35-60	0.202107	

## Frequency of Claims by Population Density

Analysis Variable : freq		
density	Mean	
high	0.256620	
low	0.159078	
medium	0.206627	

#### Frequency of Claims by Vehicle Horsepower

Analysis Variable : freq		
hp	Mean	
high	0.271875	
low	0.163189	
medium	0.209103	

#### Claim Cost by Age

Analysis Variable : cost		
age	Mean	
+60	1467.317289	
-21	4796.660193	
21-35	3866.752541	
35-60	1952.739463	

## Claim Cost by Population Density

Analysis Variable : cost		
density	Mean	
high	1971.156427	
low	2982.298211	
medium	2468.733615	

## Claim Cost by Vehicle Horsepower

Analysis Variable : cost			
hp Mean			
high	3021.604702		

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Analysis Variable : cost

hpMeanlow2019.198039medium2503.285382

### Average Pure Premium of the Current Portfolio

Analysis Variable : pp

*Mean* 549.044395

#### Factors for the Lowest Premium

age	density	hp
+60	high	low

## Factors for the Highest Premium

age density		hp
-21	medium	high

### Volume of New Business by Strategy

Sum	Strategy
85509393	Strategy A
61518593	Strategy B
25628484	Strategy C

## Volume of New Profit by Strategy

Sum	Strategy
4071876	Strategy A
5592599	Strategy B
3342846	Strategy C

#### Final Pricing Strategy

age	density	hp	best_price
+60	high	high	458.68
+60	high	low	99.06
+60	high	medium	233.96
+60	low	high	453.49
+60	low	low	119.74
+60	low	medium	241.86
+60	medium	high	515.37
+60	medium	low	116.03
+60	medium	medium	276.72
-21	high	high	2352.34
-21	high	low	1321.74

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density	hp	best_price
high	medium	1781.81
low	high	2174.57
low	low	1245.74
low	medium	1554.31
medium	high	2415.97
medium	low	1333.77
medium	medium	1660.20
high	high	1772.97
high	low	827.24
high	medium	1173.69
low	high	1418.50
low	low	741.74
low	medium	1033.42
medium	high	1594.99
medium	low	786.74
medium	medium	1134.69
high	high	732.40
high	low	227.90
high	medium	434.92
low	high	733.99
low	low	260.79
low	medium	453.57
medium	high	765.80
medium	low	270.97
medium	medium	459.72
	high low low medium medium high high low low medium medium high low low low medium high high low low medium medium medium high high hogh low low medium medium high high hogh low low medium medium	high medium low low low medium medium high medium low medium high high low high low low medium low medium medium low low low medium medium high medium low medium high low low low medium high high high low medium high high high low high low high low high low medium high high high low high medium low medium high high high low high low high low low low low medium medium high medium high low