#### **Descriptive Statistics**

#### The MEANS Procedure

Variable	Mean	Median	Mode	Std Dev	Variance	Minimum	Maximum
car_ID	103.0000000	103.0000000		59.3225646	3519.17	1.0000000	205.0000000
symboling	0.8341463	1.0000000	0	1.2453068	1.5507891	-2.0000000	3.0000000
wheelbase	98.7565854	97.0000000	94.5000000	6.0217757	36.2617824	86.6000000	120.9000000
carlength	174.0492683	173.2000000	157.3000000	12.3372885	152.2086882	141.1000000	208.1000000
carwidth	65.9078049	65.5000000	63.8000000	2.1452039	4.6018996	60.3000000	72.3000000
carheight	53.7248780	54.1000000	50.8000000	2.4435220	5.9707996	47.8000000	59.8000000
curbweight	2555.57	2414.00	2385.00	520.6802035	271107.87	1488.00	4066.00
enginesize	126.9073171	120.0000000	92.0000000	41.6426934	1734.11	61.0000000	326.0000000
boreratio	3.3297561	3.3100000	3.6200000	0.2708437	0.0733563	2.5400000	3.9400000
stroke	3.2554146	3.2900000	3.4000000	0.3135970	0.0983431	2.0700000	4.1700000
compressionratio	10.1425366	9.0000000	9.0000000	3.9720403	15.7771043	7.0000000	23.0000000
horsepower	104.1170732	95.0000000	68.0000000	39.5441668	1563.74	48.0000000	288.0000000
peakrpm	5125.12	5200.00	5500.00	476.9856431	227515.30	4150.00	6600.00
citympg	25.2195122	24.0000000	31.0000000	6.5421417	42.7996174	13.0000000	49.0000000
highwaympg	30.7512195	30.0000000	25.0000000	6.8864431	47.4230990	16.0000000	54.0000000
price	13276.71	10295.00	5572.00	7988.85	63821761.58	5118.00	45400.00

#### **Descriptive Statistics**

## The UNIVARIATE Procedure Variable: price

Moments								
N	205	Sum Weights	205					
Mean	13276.7106	Sum Observations	2721725.67					
Std Deviation	7988.85233	Variance	63821761.6					
Skewness	1.77767816	Kurtosis	3.05164787					
Uncorrected SS	4.91552E10	Corrected SS	1.30196E10					
Coeff Variation	60.171925	Std Error Mean	557.96565					

Basic Statistical Measures								
Loc	ation	Variability						
Mean	13276.71	Std Deviation	7989					
Median	10295.00	Variance	63821762					
Mode	5572.00	Range	40282					
		Interquartile Range	8715					

#### Note: The mode displayed is the smallest of 16 modes with a count of 2.

Tests for Location: Mu0=0							
Test		Statistic	p Val	ue			
Student's t	t 23.79485		Pr >  t	<.0001			
Sign	М	102.5	Pr >=  M	<.0001			
Signed Rank	s	10557.5	Pr >=  S	<.0001			

Quantiles (Definition 5)						
Level	Quantile					
100% Max	45400					
99%	40960					
95%	32528					
90%	22625					
75% Q3	16503					
50% Median	10295					
25% Q1	7788					
10%	6649					
5%	6189					
1%	5195					
0% Min	5118					

Extreme Observations							
Low	est	Highest					
Value	Obs	Value	Obs				
5118	139	36880	18				
5151	19	37028	129				
5195	51	40960	74				
5348	151	41315	17				
5389	77	45400	75				

#### **Missing of Numeric Values**

#### The MEANS Procedure

Variable	N Miss

### Results: explore\_car\_price\_dataset.sas

Variable	N Miss
car_ID	0
symboling	0
wheelbase	0
carlength	0
carwidth	0
carheight	0
curbweight	0
enginesize	0
boreratio	0
stroke	0
compressionratio	0
horsepower	0
peakrpm	0
citympg	0
highwaympg	0
price	0

#### **Correlation Matrix**

#### The CORR Procedure

15 Variables: symboling wheelbase carlength carwidth carheight curbweight enginesize boreratio stroke compressionratio horsepower peakrpm citympg highwaympg price

Simple Statistics									
Variable	N	Mean	Std Dev	Sum	Minimum	Maximum			
symboling	205	0.83415	1.24531	171.00000	-2.00000	3.00000			
wheelbase	205	98.75659	6.02178	20245	86.60000	120.90000			
carlength	205	174.04927	12.33729	35680	141.10000	208.10000			
carwidth	205	65.90780	2.14520	13511	60.30000	72.30000			
carheight	height 205		2.44352	11014	47.80000	59.80000			
curbweight	205	2556	520.68020	523891	1488	4066			
enginesize	205	126.90732	41.64269	26016	61.00000	326.00000			
boreratio	ratio 205 3		0.27084	682.60000	2.54000	3.94000			
stroke	205	3.25541	0.31360	667.36000	2.07000	4.17000			
compressionratio	205	10.14254	3.97204	2079	7.00000	23.00000			
horsepower	205	104.11707	39.54417	21344	48.00000	288.00000			
peakrpm	205	5125	476.98564	1050650	4150	6600			
citympg	205	25.21951	6.54214	5170	13.00000	49.00000			
highwaympg	205	30.75122	6.88644	6304	16.00000	54.00000			
price	205	13277	7989	2721726	5118	45400			

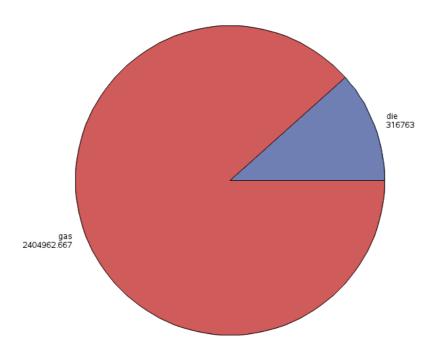
							Correlation C rob >  r  unde		N = 205						
	symboling	wheelbase	carlength	carwidth	carheight	curbweight	enginesize	boreratio	stroke	compressionratio	horsepower	peakrpm	citympg	highwaympg	price
symboling	1.00000	-0.53195 <.0001	-0.35761 <.0001	-0.23292 0.0008	-0.54104 <.0001	-0.22769 0.0010	-0.10579 0.1311	-0.13005 0.0631	-0.00874 0.9011	-0.17852 0.0104	0.07087 0.3126	0.27361 <.0001	-0.03582 0.6101	0.03461 0.6223	-0.07998 0.2543
wheelbase	-0.53195 <.0001	1.00000	0.87459 <.0001	0.79514 <.0001	0.58943 <.0001	0.77639 <.0001	0.56933 <.0001	0.48875 <.0001	0.16096 0.0211	0.24979 0.0003	0.35329 <.0001	-0.36047 <.0001	-0.47041 <.0001	-0.54408 <.0001	0.57782 <.0001
carlength	-0.35761 <.0001	0.87459 <.0001	1.00000	0.84112 <.0001	0.49103 <.0001	0.87773 <.0001	0.68336 <.0001	0.60645 <.0001	0.12953 0.0642	0.15841 0.0233	0.55262 <.0001	-0.28724 <.0001	-0.67091 <.0001	-0.70466 <.0001	0.68292 <.0001
carwidth	-0.23292 0.0008	0.79514 <.0001	0.84112 <.0001	1.00000	0.27921 <.0001	0.86703 <.0001	0.73543 <.0001	0.55915 <.0001	0.18294 0.0087	0.18113 0.0093	0.64073 <.0001	-0.22001 0.0015	-0.64270 <.0001	-0.67722 <.0001	0.75933 <.0001
carheight	-0.54104 <.0001	0.58943 <.0001	0.49103 <.0001	0.27921 <.0001	1.00000	0.29557 <.0001	0.06715 0.3388	0.17107 0.0142	-0.05531 0.4309	0.26121 0.0002	-0.10880 0.1204	-0.32041 <.0001	-0.04864 0.4886	-0.10736 0.1255	0.11934 0.0883
curbweight	-0.22769 0.0010	0.77639 <.0001	0.87773 <.0001	0.86703 <.0001	0.29557 <.0001	1.00000	0.85059 <.0001	0.64848 <.0001	0.16879 0.0155	0.15136 0.0303	0.75074 <.0001	-0.26624 0.0001	-0.75741 <.0001	-0.79746 <.0001	0.83530 <.0001
enginesize	-0.10579 0.1311	0.56933 <.0001	0.68336 <.0001	0.73543 <.0001	0.06715 0.3388	0.85059 <.0001	1.00000	0.58377 <.0001	0.20313 0.0035	0.02897 0.6801	0.80977 <.0001	-0.24466 0.0004	-0.65366 <.0001	-0.67747 <.0001	0.87414 <.0001
boreratio	-0.13005 0.0631	0.48875 <.0001	0.60645 <.0001	0.55915 <.0001	0.17107 0.0142	0.64848 <.0001	0.58377 <.0001	1.00000	-0.05591 0.4259	0.00520 0.9410	0.57368 <.0001	-0.25498 0.0002	-0.58453 <.0001	-0.58701 <.0001	0.55317 <.0001
stroke	-0.00874 0.9011	0.16096 0.0211	0.12953 0.0642	0.18294 0.0087	-0.05531 0.4309	0.16879 0.0155	0.20313 0.0035	-0.05591 0.4259	1.00000	0.18611 0.0075	0.08094 0.2486	-0.06796 0.3329	-0.04214 0.5485	-0.04393 0.5317	0.07944 0.2575
compressionratio	-0.17852 0.0104	0.24979 0.0003	0.15841 0.0233	0.18113 0.0093	0.26121 0.0002	0.15136 0.0303	0.02897 0.6801	0.00520 0.9410	0.18611 0.0075	1.00000	-0.20433 0.0033	-0.43574 <.0001	0.32470 <.0001	0.26520 0.0001	0.06798 0.3328
horsepower	0.07087 0.3126	0.35329 <.0001	0.55262 <.0001	0.64073 <.0001	-0.10880 0.1204	0.75074 <.0001	0.80977 <.0001	0.57368 <.0001	0.08094 0.2486	-0.20433 0.0033	1.00000	0.13107 0.0610	-0.80146 <.0001	-0.77054 <.0001	0.80814 <.0001
peakrpm	0.27361 <.0001	-0.36047 <.0001	-0.28724 <.0001	-0.22001 0.0015	-0.32041 <.0001	-0.26624 0.0001	-0.24466 0.0004	-0.25498 0.0002	-0.06796 0.3329	-0.43574 <.0001	0.13107 0.0610	1.00000	-0.11354 0.1050	-0.05427 0.4396	-0.08527 0.2241
citympg	-0.03582 0.6101	-0.47041 <.0001	-0.67091 <.0001	-0.64270 <.0001	-0.04864 0.4886	-0.75741 <.0001	-0.65366 <.0001	-0.58453 <.0001	-0.04214 0.5485	0.32470 <.0001	-0.80146 <.0001	-0.11354 0.1050	1.00000	0.97134 <.0001	-0.68575 <.0001
highwaympg	0.03461 0.6223	-0.54408 <.0001	-0.70466 <.0001	-0.67722 <.0001	-0.10736 0.1255	-0.79746 <.0001	-0.67747 <.0001	-0.58701 <.0001	-0.04393 0.5317	0.26520 0.0001	-0.77054 <.0001	-0.05427 0.4396	0.97134 <.0001	1.00000	-0.69760 <.0001
price	-0.07998 0.2543	0.57782 <.0001	0.68292 <.0001	0.75933 <.0001	0.11934 0.0883	0.83530 <.0001	0.87414 <.0001	0.55317 <.0001	0.07944 0.2575	0.06798 0.3328	0.80814 <.0001	-0.08527 0.2241	-0.68575 <.0001	-0.69760 <.0001	1.00000

#### Variable Uniques

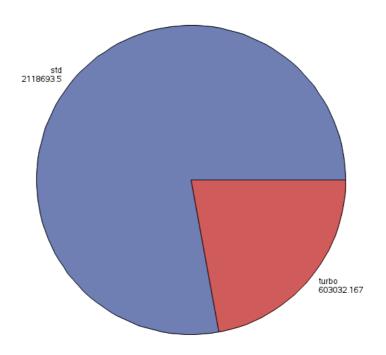
Car Name	Fuel Type	Aspiration	Door Number	Car Body	Drive Wheel	Engine Location	Engine Type	Cylinder Number	Fuel System
147	2	2	2	5	3	2	6	7	8

## **Fuel Type by Price**

SUM of price by fueltype

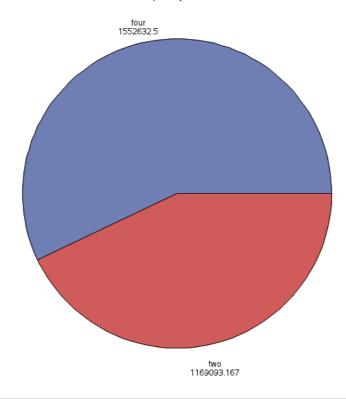


# **Aspiration by Price**SUM of price by aspiration

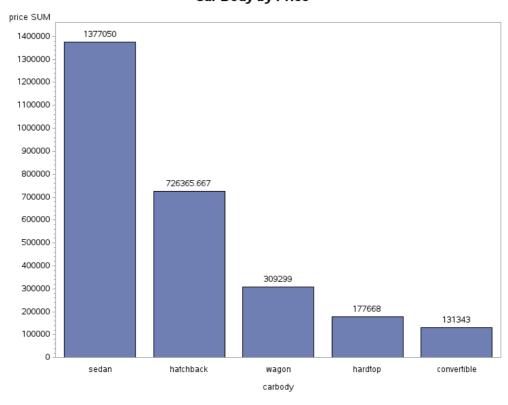


## Door Number by Price

SUM of price by doornumber

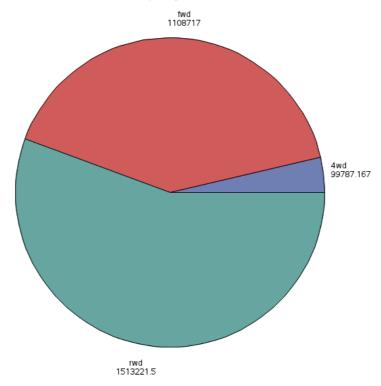


## **Car Body by Price**

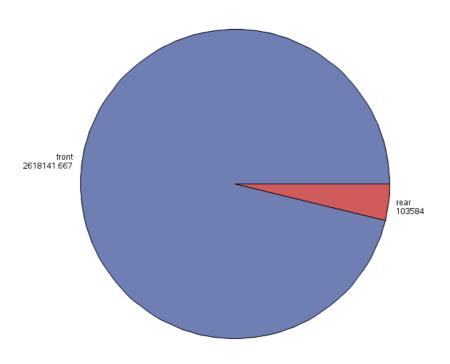


## **Drive Wheel by Price**

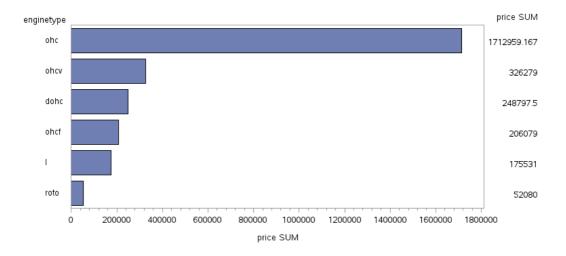
SUM of price by drivewheel



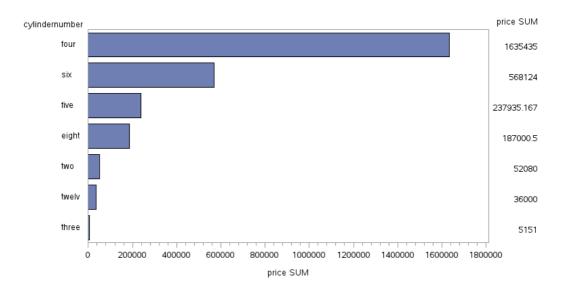
# Engine Location by Price SUM of price by enginelocation



## **Engine Type by Price**



## **Cylinder Number by Price**



## **Fuel System by Price**

