Consumer Price Index - Average Price Data
Original Data Value

Series Id: APU000074714

Area: U.S. city average
Item: Gasoline, unleaded regular, per gallon/3.785 liters
Years: 1982 to 2011

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
1982	1.358	1.334	1.284	1.225	1.237	1.309	1.331	1.323
1983	1.23	1.187	1.152	1.215	1.259	1.277	1.288	1.285
1984	1.216	1.209	1.21	1.227	1.236	1.229	1.212	1.196
1985	1.148	1.131	1.159	1.205	1.231	1.241	1.242	1.229
1986	1.194	1.12	0.981	0.888	0.923	0.955	0.89	0.843
1987	0.862	0.905	0.912	0.934	0.941	0.958	0.971	0.995
1988	0.933	0.913	0.904	0.93	0.955	0.955	0.967	0.987
1989	0.918	0.926	0.94	1.065	1.119	1.114	1.092	1.057
1990	1.042	1.037	1.023	1.044	1.061	1.088	1.084	1.19
1991	1.247	1.143	1.082	1.104	1.156	1.16	1.127	1.14
1992	1.073	1.054	1.058	1.079	1.136	1.179	1.174	1.158
1993	1.117	1.108	1.098	1.112	1.129	1.13	1.109	1.097
1994	1.043	1.051	1.045	1.064	1.08	1.106	1.136	1.182
1995	1.129	1.12	1.115	1.14	1.2	1.226	1.195	1.164
1996	1.129	1.124	1.162	1.251	1.323	1.299	1.272	1.24
1997	1.261	1.255	1.235	1.231	1.226	1.229	1.205	1.253
1998	1.131	1.082	1.041	1.052	1.092	1.094	1.079	1.052
1999	0.972	0.955	0.991	1.177	1.178	1.148	1.189	1.255
2000	1.301	1.369	1.541	1.506	1.498	1.617	1.593	1.51
2001	1.472	1.484	1.447	1.564	1.729	1.64	1.482	1.427
2002	1.139	1.13	1.241	1.407	1.421	1.404	1.412	1.423
2003	1.473	1.641	1.748	1.659	1.542	1.514	1.524	1.628
2004	1.592	1.672	1.766	1.833	2.009	2.041	1.939	1.898
2005	1.823	1.918	2.065	2.283	2.216	2.176	2.316	2.506
2006	2.315	2.31	2.401	2.757	2.947	2.917	2.999	2.985
2007	2.274	2.285	2.592	2.86	3.13	3.052	2.961	2.782
2008	3.047	3.033	3.258	3.441	3.764	4.065	4.09	3.786
2009	1.787	1.928	1.949	2.056	2.265	2.631	2.543	2.627
2010	2.731	2.659	2.78	2.858	2.869	2.736	2.736	2.745
2011	3.091	3.167						

Final Project

To complete this project, use the "Final Project Data Set" See below page Two

PART I:

1. Calculate the mean yearly value using the average gas prices by month found in the "Final Project Data Set."

Calculation of average gas price by is shown in column M above

2. Using the years as your x-axis and the annual mean as your y-axis, create a scatterplot and a linear regression lir

Please refer Scatterplot and Regression sheet

3. Answer the following questions using your scatterplot and linear regression line:

What is the slope of the linear regression line?

What is the Y-intercept of the linear regression line?

What is the equation of the linear regression line in slope-intercept form?

Based on the linear regression line, what would be an estimated cost of gas in the year 2020?

What are the residuals of each year?

Select a current price that you have seen or paid recently for gas. Is that price within the range of the linear regre

Please refer Scatterplot and Regression sheet for Solution

Sep	Oct	Nov	Dec	Average
1.307	1.295	1.283	1.26	1.2955
1.274	1.255	1.241	1.231	1.241167
1.203	1.209	1.207	1.193	1.21225
1.216	1.204	1.207	1.208	1.20175
0.86	0.831	0.821	0.823	0.927417
0.99	0.976	0.976	0.961	0.948417
0.974	0.957	0.949	0.93	0.946167
1.029	1.027	0.999	0.98	1.022167
1.294	1.378	1.377	1.354	1.164333
1.143	1.122	1.134	1.123	1.140083
1.158	1.154	1.159	1.136	1.1265
1.085	1.127	1.113	1.07	1.107917
1.177	1.152	1.163	1.143	1.111833
1.148	1.127	1.101	1.101	1.147167
1.234	1.227	1.25	1.26	1.230917
1.277	1.242	1.213	1.177	1.233667
1.033	1.042	1.028	0.986	1.059333
1.28	1.274	1.264	1.298	1.165083
1.582	1.559	1.555	1.489	1.51
1.531	1.362	1.263	1.131	1.461
1.422	1.449	1.448	1.394	1.3575
1.728	1.603	1.535	1.494	1.59075
1.891	2.029	2.01	1.882	1.880167
2.927	2.785	2.343	2.186	2.295333
2.589	2.272	2.241	2.334	2.588917
2.789	2.793	3.069	3.02	2.800583
3.698	3.173	2.151	1.689	3.26625
2.574	2.561	2.66	2.621	2.350167
2.704	2.795	2.852	2.985	2.7875
				3.129

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ssion line or is it an outlier? Is it within the confidence interval of 5% or either end?