

Problem B: Curbing City Violence

A regional city has had lots of problems with gangs and violence over the years. The mayor, chief of police, and city council need your help. Data are available for the following: Incidents of violence, Homicides, Assaults, Regional Population (Census data), Unemployment, Unemployment rate, High School enrollment, High school drop outs, Graduation rate, Drop out rate, Prison population, Released on parole, Parole violations, Percent of parole violations, and Juvenile Inmates.

Analyze and model these data to give the city a plan to reduce violence. After you complete your analysis and model, prepare a news release for the mayor briefly outlining your proposals that recommend a campaign strategy to curb the violence.

2010 HiMCM Problem B: Data

YEAR	INCIDENCE OF VIOLENCE	HOMICIDES	ASSAULTS	COUNTY POP	CITY POP
2000	752	18	734	401762	151060
2001	814	15	799	406953	144696
2002	712	20	692	412376	146689
2003	744	19	725	417419	148117
2004	695	17	678	420802	149906
2005	652	7	645	421374	149675
2006	690	7	683	421417	148870
2007	725	14	711	423762	149208
2008	736	25	711	428549	150898

YEAR	UNEMPLOYMENT	UNEMPLOYMENT RATE
2000	15861.3	10.5
2001	16061.256	11.1
2002	18629.503	12.7
2003	18810.859	12.7
2004	17688.908	11.8
2005	15715.875	10.5
2006	14738.13	9.9
2007	15368.424	10.3
2008	17805.964	11.8

YEAR	HS ENROLLMENT	HS DROP OUTS	GRADUATION RATE	HS D/O RATE
2000	8252	203	0.84	0.0246
2001	8695	225	0.836	0.025876941
2002	8863	204	0.877	0.023017037
2003	9253	75	0.9	0.008105479
2004	9308	124	0.891	0.013321874
2005	9492	85	0.898	0.008954909
2006	9496	124	0.92	0.01305813
2007	9482	180	0.884	0.018983337
2008	9561	147	0.89	0.015374961

YEAR	JUVENILE INMATES	PRISON POP	RELEASED ON PAROLE	PAROLE VIOLATION	% OF PAROLE VIOLATION
2000		154014	126117	89363	0.708572199
2001		153649	125991	88972	0.706177425
2002		151579	117310	85574	0.729468928
2003	4400	153783	115424	78053	0.676228514
2004	3436	157895	118018	76725	0.650112695
2005	2881	158837	122737	80962	0.659638088
2006	2517	166547	131315	89883	0.684483875
2007	2115	166277	137590	92628	0.67321753
2008	1568	166277	137590	92628	0.67321753