

## Homework 13

Name \_\_\_\_\_

1. According to a USA Today/Gallup poll, (Peterson 1997), 283 out of 496 teens who date have reported dating somebody of another race at some point. Use Minitab to determine if this represents a significant majority. (Hint: test the null hypothesis that  $p = .50$ ).

a.) State the null and alternative hypotheses.

b.) State your conclusion based on a confidence interval or a p-value.

2. A study at Penn State University asked 189 students the question "What's the fastest you have ever driven a car? \_\_\_\_mph." (Utts and Heckard, pg. 2). Copy and paste the data into Minitab to determine if the population average is significantly different than 100 mph. (You can mess with the data using the data pull down menu. You need all the numbers in one column with no text.)

Top Speed	100	125	130	115	75	105	130	80	30	
	110	115	80	105	95	95	95	95	100	85
	109	124	85	105	110	85	75	110	80	85
	90	95	140	120	101	90	70	110	80	87
	140	100	120	90	80	85	90	80	80	85
	105	125	92	100	112	90	70	90	95	90
	150	140	130	105	120	90	82	105	100	85
	120	85	125	100	110	120	85	90	90	75
	110	120	110	120	115	85	100	110	100	90
	110	115	90	100	125	100	90	75	95	102
	90	105	110	100	55	120	75	100	80	80
	115	125	110	80	90	75	90	90	80	100
	95	102	95	100	80	85	110	110	50	95
	145	85	95	120	75	80	80	85	88	110
	140	120	110	105	83	70	80	90	90	80
	110	110	105	60	80	85	110	80	90	95
	105	120	80	125	100	110	110	80	85	90
	85	115	100	120	100	85	95	85	70	80
	95	94	110	100	90	75	75	50	90	90

a.) State the null and alternative hypotheses.

b.) State your conclusion based on the confidence interval or the p-value.