Name: Key Hour: _____ Date: _____

AP Stats Chapter 8 Formula Study Sheet

Lesson	8.2	8.3
What are we trying to estimate?	proportion	mean
Symbol for statistic	$\hat{p}$	$\bar{x}$
Symbol for parameter	p	μ
Name of the procedure	1 sample z interval for p	1 sample t interval for μ
RANDOM condition	"SRS" "Random Sample"	"SRS" "Random Sample"
10% condition	$n < \frac{1}{10}$ of population	$n < \frac{1}{10}$ of population
NORMAL condition	Large Counts $n \cdot \hat{p} \geq 10$ $n(1-\hat{p}) \geq 10$	- Pop. is approx. Normal - $n \geq 30$ CLT - sample has no strong skew or outliers.
Formula for standard deviation	$SE_{\hat{p}} = \sqrt{\frac{\hat{p}(1-\hat{p})}{n}}$	$SE_{\bar{x}} = \frac{s_x}{\sqrt{n}}$
z* or t*	z^*	t^* use $df = n-1$
Formula for margin of error	$z^* \sqrt{\frac{\hat{p}(1-\hat{p})}{n}}$	$t^* \frac{s_x}{\sqrt{n}}$
General formula for confidence interval	Point Est $\pm$ Margin of Error	Pt. Est. $\pm$ M.O.E.
Specific formula for confidence interval	$\hat{p} \pm z^* \sqrt{\frac{\hat{p}(1-\hat{p})}{n}}$	$\bar{x} \pm t^* \frac{s_x}{\sqrt{n}}$

4 STEP PROCESS

STATE: State the parameter you want to estimate and the confidence level.

PLAN: Identify the appropriate inference method and check conditions.

DO: If the conditions are met, perform the calculations.

General Formula, Specific Formula, Plug numbers into the formula, Answer.

CONCLUDE: Interpret your interval in the context of the problem.