

AP Statistics \hat{p} Activities with Beads.

1. Calculate three confidence intervals for the p of black beads where $n=30$. Repeat for colors red, white and orange for a total of 12 confidence intervals. Use 90%, 95%, & 99% confidences.
2. Given $\alpha=.05$ perform tests of significance (i.e. calculate z-scores) for the following hypotheses:

<u>Black</u>	<u>Red</u>	<u>Orange</u>	<u>White</u>
$H_0: p = .2$	$H_0: p = .25$	$H_0: p = .6$	$H_0: p = ?$
$H_A: p > .2$	$H_A: p \neq .25$	$H_A: p < .4$	$H_A: p \square ?$

You will decide what values of p are appropriate for the white beads along with the direction of the alternative hypothesis.

Show all your work! Groups of 3.