

$$\frac{16-14}{a) \hat{p} = \frac{\quad}{1208} = .54$$

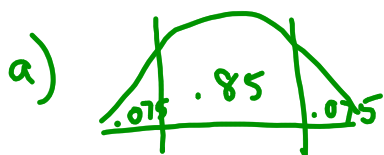
$$.54 \pm 1.96 \sqrt{\frac{.54(1-.54)}{1208}}$$

$$.54 \pm .0278$$

$$(.5116, .5678)$$

I am 95% conf. that the actual prop. of all adult Amer. who favor Santos is in this interval.

b) Yes \rightarrow .5 is not in the c.i., I am 95% conf. the prop. is $>$.5.

16-20

$$\frac{1 - .85}{2} = .075$$

$$\text{invnorm}(.075) = -1.44$$

$$z^* = 1.44$$

b) $z^* = 2.24$

c) $z^* = .70$

d) 97.5% conf. has largest z^*
more conf = larger area

16-23

a) p = actual prop. of all adults that oppose abolishing the penny.

$$b) .59 \pm 1.96 \sqrt{\frac{.59(1-.59)}{2316}}$$

$$.59 \pm .0198$$

$$(.5698, .6098)$$

• I am 95% conf. the actual prop. of all adults who are opposed to abolishing the penny is in this interval.

or

• I am 95% conf. that between .5698 and .6098 of all adults are opposed to abolishing the penny.

$$c) .2316(.59) \geq 10 \quad 2316(1-.59) \geq 10$$

$$1366.44 \geq 10$$

$$949.56 \geq 10$$

• problem states it was a random sample (SRS from pop. of interest.) of adults.

* yes, conditions appear satisfied.