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a) exp: botox or not
resp: relief or not

b)

	Botox	not	
relief	9	2	11
not	6	14	20
	15	16	31

d) Prob. of randomly getting 9 or more successes in Botox group, if Botox does nothing.

c) $\frac{10}{1000} = .01$

e) $n_1 p \geq 5$
 $15(.35) \geq 5$

$n_2 p \geq 5$
 $16(.35) \geq 5$

$n_1(1-p_1) \geq 5$
 $15(1-.35) \geq 5$

$n_2(1-p_2) \geq 5$
 $16(1-.35) \geq 5$

$\hat{p} = \frac{11}{31} = .35$

• subjects r.a. to Botox/not

21-11

girls $\hat{p}_G = \frac{\quad}{1036} = .64$

Boys $\hat{p}_B = \frac{\quad}{996} = .72$

a) $.64 - .72 = -.08$

Girls have .08 less w/ a TV than boys.
(diff. in samples)

b) $(.64 - .72) \pm 1.96 \sqrt{\frac{.64(1-.64)}{1036} + \frac{.72(1-.72)}{996}}$
 $-.08 \pm 1.96 \sqrt{\quad}$

$(-.12, -.04)$

95% conf. the diff in the actual prop. of boys & girls w/ TV's is between .04 & .12, with girls being less likely.