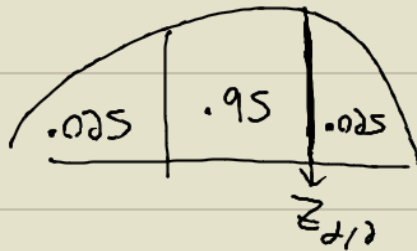


5. $E = 5\% = .05$

95% CONFIDENCE



$\text{INVNORM}(.975) = 1.96$

so $z_{\alpha/2} = 1.96$

$E = .05 \quad z_{\alpha/2} = 1.96$

a) MFW: 20% WOFW: 17%

$\hat{p}_1 = .20 \quad \hat{p}_2 = .17$

$$n = n_1 = n_2 = \left[\hat{p}_1(1-\hat{p}_1) + \hat{p}_2(1-\hat{p}_2) \right] \left(\frac{z_{\alpha/2}}{E} \right)^2$$
$$= \left[.20(1-.20) + .17(1-.17) \right] \left(\frac{1.96}{.05} \right)^2$$

$n = n_1 = n_2 = 463$

b) $n = n_1 = n_2 = 0.5 \left(\frac{z_{\alpha/2}}{E} \right)^2$

$= 0.5 \left(\frac{1.96}{.05} \right)^2$

$n = n_1 = n_2 = 769$