

Problem 1

	A	E
=		
1	p	
2	CL	
3	E	
4	CV	f
5		
6		
7		
8		
9		
10		
11		
A1	p	

1) Given $p = 0.85$

p implies $q = 1 - 0.85 = 0.15$

$E = 0.02$

$CL = 0.9$

CL implies $\alpha = 0.1$ and half $\alpha = 0.05$

$CV = 1.645$ (famous)

$$n = [(1.645)^2 (0.85)(0.15)] / (0.02)^2$$

$$= 862.545$$

WE ALWAYS ROUND THIS UP TO NEXT INTEGER!

$= 863.$

Problem 2

	A	B
	=	
1	p	
2	CL	
3	E	
4	CV	fa
5		
6		
7		
8		
9		
10		
11		
	A1	p

1) Given $p = 0.45$

p implies $q = 1 - 0.45 = 0.55$

$E = 0.02$

$CL = 0.99$

CL implies $\alpha = 0.01$ and half $\alpha = 0.005$

$CV = 2.575$ (famous)

$$n = [(2.575)^2 (0.45)(0.55)] / (0.02)^2$$

$$= 4102.7$$

WE ALWAYS ROUND THIS UP TO NEXT INTEGER!

$= 4103.$

	A	B
=		
1		
2	CL	
3	E	
4	CV	fa
5		
6		
7		
8		
9		
10		
11		

E = 0.034

CL = 0.95

CL implies alpha = 0.05 and half alpha = 0.025

CV = 1.96 (famous)

$$= 830.796$$

WE ALWAYS ROUND THIS UP TO NEXT INTEGER!

$$= 831.$$

Problem 4

	A	B
=		
1		
2	CL	
3	=	
4	CV	not f
5		
6		
7		
8		
9		
10		
11		

4) Given p = **UNKNOWN**

$$E = 0.097$$

$$CL = 0.81$$

CL implies alpha = 0.19 and half alpha = 0.095

$$CV = 1.31058 \text{ (NOT famous)}$$

$$= \text{invnorm}(0.095, 0, 1)$$

$$n = [(1.31058)^2 (0.25)] / (0.097)^2$$

$$= 45.6376$$

WE ALWAYS ROUND THIS UP TO NEXT INTEGER!

$$= 46.$$