| | A | B |
|---|---|---|
| = | | |
| 1 | min | |
| 2 | max | |
| 3 | | |
| 4 | | |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | | |
| 9 | | |
| 10 | | |
| 11 | | |
| 12 | | |
| 13 | | |
| 14 | | |
| 15 | | |

A1 "min"

1) Given Interval Notation (21.5 ,43.9 )

p=(43.9 +21.5 )/2

=65.4 /2

=32.7

E = (43.9 −21.5 )/2

=22.4 /2

=11.2

**Conjunction notation**

21.5 <p<43.9

**Tolerance Notation**

32.7 ±11.2

| | A | B |
|---|---|---|
| = | | |
| 1 | min | |
| 2 | max | |
| 3 | | |
| 4 | | |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | | |
| 9 | | |
| 10 | | |
| 11 | | |
| 12 | | |
| 13 | | |
| 14 | | |
| 15 | | |

A1 "min"

2) Given Conjunction Notation $32.9 < p < 44.7$

$p=(44.7+32.9)/2$

$=77.6/2$

$=38.8$

$E = (44.7-32.9)/2$

$=11.8/2$

$=5.9$

**Interval notation**

$(32.9, 44.7)$

**Tolerance Notation**

$38.8 \pm 5.9$

| | A | B |
|---|---|---|
| = | | |
| 1 | p | 5 |
| 2 | E | |
| 3 | | |
| 4 | | |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | | |
| 9 | | |
| 10 | | |
| 11 | | |
| 12 | | |
| 13 | | |
| 14 | | |
| 15 | | |

A1 p

3) Given p = 57.88 E =7.52

**Interval notation**

$(57.88-7.52, 57.88+7.52)$

$(50.36, 65.4)$

**Conjunction notation**

$50.36 < p < 65.4$

**Tolerance Notation**

$57.88 \pm 7.52$

| | A | B |
|---|---|---|
| = | | |
| 1 | | |
| 2 | E | |
| 3 | | |
| 4 | | |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | | |
| 9 | | |
| 10 | | |
| 11 | | |
| 12 | | |
| 13 | | |
| 14 | | |
| 15 | | |

A1

4) Given Tolerance Notation $45.8 \pm 19.6$

p = 45.8

E = 19.6

**Interval notation**

$(45.8-19.6, 45.8+19.6)$

$(26.2, 65.4)$

**Conjunction notation**

$26.2 < p < 65.4$

| | B |
|---|---|
| 1 | 175 |
| 2 | 150 |
| 3 | 90 |
| 4 | famous |
| 5 | 1.645 |
| 6 | |
| 7 | |
| 8 | |
| 9 | |
| 10 | |
| 11 | |
| 12 | |
| 13 | |
| 14 | |
| 15 | |

B6

5) Given n=175 $x$=150 Confidence Level =90 %

Implied Alpha =100%−90 %=10. % =0.1

Implied 1/2 Alpha=$\frac{1}{2}$ 10. =5. % =0.05

p =150 /175 =0.857143 q = 1−0.857143 =0.142857

CV =1.645 (famous)

E =1.645 √ [0.857143 )(0.142857 )/(175 )]

E =e_given ▸ 0.043514

**Tolerance Notation** 0.857143 ±0.043514

**Interval notation**

(0.857143 −0.043514 ,0.857143 +0.043514 )

(0.813629 ,0.900656 )

**Conjunction notation**

0.813629 <p<0.900656

| | A | B |
|---|---|---|
| = | | |
| 1 | n | 9 |
| 2 | x | 3 |
| 3 | CL | |
| 4 | CV | not famo |
| 5 | | |
| 6 | | |
| 7 | | |
| 8 | | |
| 9 | | |
| 10 | | |
| 11 | | |
| 12 | | |
| 13 | | |
| 14 | | |
| 15 | | |

A1 n

6) Given n=900 $x$=361 Confidence Level =86 %

Implied Alpha =100%−86 %=14. % =0.14

Implied 1/2 Alpha=$\frac{1}{2}$ 14. =7. % =0.07

p =361 /900 =0.401111 q = 1−0.401111 =0.598889

CV =invnorm( 0.07 ,0,1) = -1.47579 (use positive value)

E =1.47579 √ [0.401111 )(0.598889 )/(900 )]

E =0.024111

**Tolerance Notation** 0.401111 ±0.024111

**Interval notation**

(0.401111 −0.024111 ,0.401111 +0.024111 )

(0.377 ,0.425222 )

**Conjunction notation**

0.377 <p<0.425222