I

1
2
3
4

II

150 180

120		
25	2	50
3	10	30
2	20	40
30		
5	2	10
1	10	10
1	10	10

III

1
2
3
4
5
6

7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22

1
2
3
4
5
6
7
8

IV.

[1] . 2013.
[2] . 2 2015.
[3] . 2010 .

V.

. 1—30 30 2 60

	1	2	3	4	5	6	7	8	9	10
	11	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
	21	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**

1. 60 40

A.
B.
C.
D.

2. 80 10
70 90

A. 95%
B. 89
C. 68
D. 99

3. 50 8 64

A. 50 8
B. 50 1
C. 50 4
D. 8 8

4. 95%

A. 95%
B. 5%
C.
D.

5. 2000 40% 2005
120 57 $\alpha = 0.05$
2005

A $H_0: \pi = 40\%$, $H_1: \pi \neq 40\%$

B. $H_0: \pi \geq 40\%$, $H_1: \pi < 40\%$

C $H_0: \pi \leq 40\%$, $H_1: \pi > 40\%$

D $H_0: \pi < 40\%$, $H_1: \pi \geq 40\%$

6.

A. x x_0 y

B. x x_0 y

C. y y_0 x

D. y y_0 x

7. F

A.

B.

C.

D.

8.

A.

B.

C.

D.

9.

A.

B.

C.

D.

10. 2

A. 68%

B. 90%

C. 95%

D. 99%

11. 200 50 $n=100$ $\bar{x}$

μ $\bar{x}$

A. 200 5

B. 200 20

C. 200 0.5

D. 200 25

12. 95%

A 95%

B 5%

B

C

D

14.

A

B.

C.

D. 0

15.

A.

B.

C.

D.

16. t

A.

B.

C.

D. $H_0: \beta_1 = \beta_2 = \cdots = \beta_k = 0$

17.

"A"

"B"

	SS	df	MS	F
	22.22	2	11.11	A
	955.56	2	477.78	B
	611.11	4	152.78	
	1588.89	8		

A. 0.073 3.127 B. 0.023 43.005

C. 13.752 0.320 D. 43.005 0.320

18. $\hat{Y}_t = 100 \times (0.8)^t$

A. 0.8 B. 0.2

C. 80% D. 20%

19.

A.

B.

C.

D.

20.

A. 0 B. 1

C. 0 D. 1

21. 30%

$H_0 : \pi \leq 30\%$, $H_1 : \pi > 30\%$

A 30%

B 30%

C 30%

D 30%

22.22.

A B

C 22. C[illegible]

A　$[0,0.5]$　　B　$[0.5,2.5]$　　C　$[1,1.5]$　D　$[2,3]$

. **1—4** **4** **10** **40**

1. P

2. 5000 5000

3.

4. $f(x)$ μ σ $f(x)$

μ σ

. **1—3** **3** **1** **2** **20** **3**
10 **50**

1. 100
50

96-98	2

3

4 R^2

5 s_e

3. A,B,C N_1 N_2 A,B,C

N_1 A B,C

N_2 A,B,C 0.80,0.90,0.90

N_1 N_2 P_1 P_2

1. D 2. C 3. B 4. D 5. C 6. B 7. A 8. D 9. D 10. C
11. A 12. C 13. A 14. D 15. C 16. B 17. A 18.D 19.D 20.B
21.C 22.C 23.C 24.B 25.D 26.D 27.C 28.D 29.A 30.B

1. 1 H_0

P

2 P
3 P α $P < \alpha$

2. 5000
5000

3. 1

2

3

4. μ

μ σ

σ $x = \mu$

σ^2

1. 1 $n = 50$ $z_{0.05/2} = 1.96$

$$\bar{x} = \frac{\sum_{i=1}^{k} M_i f_i}{n} = \frac{5066}{50} = 101.32$$

$$s = \sqrt{\frac{\sum_{i=1}^{k} (M_i - \bar{x})^2 f_i}{n-1}} = \sqrt{\frac{130.88}{49}} = 1.634$$

95%

$$\bar{x} \pm z_{\alpha/2} \frac{s}{\sqrt{n}} = 101.32 \pm 1.96 \times \frac{1.634}{\sqrt{50}} = 101.32 \pm 0.453$$

100.867 101.773

2 $H_0: \mu = 100$ $H_1: \mu \neq 100$

$$z = \frac{\bar{x} - \mu_0}{s/\sqrt{n}} = \frac{101.32 - 100}{1.634/\sqrt{50}} = 5.712$$

$z = 5.712 > z_{0.05/2} = 1.96$

2. 1

	df	SS	MS	F	Significance F
	3	**12026774.1**	4008924.7	**72.80**	8.88341E-13
	26	**1431812.6**	**55069.7**		
	29	13458586.7			

2

$$\hat{y} = 7589.1025 - 117.8861 x_1 + 80.6107 x_2 + 0.5012 x_3$$

$\hat{\beta}_1 = -117.8861$

117.8861 $\hat{\beta}_2 = 80.6107$

80.6107

$\hat{\beta}_3 = 0.5012$

0.5012

3 Significance F=8.88341E-13<$\alpha = 0.05$

4 $R^2 = \frac{SSR}{SST} = \frac{12026774.1}{13458586.7} = 89.36\%$

89.36%

5 $s_e = \sqrt{\frac{SSE}{n-k-1}} = \sqrt{MSE} = \sqrt{55069.7} = 234.67$

234.67

3. A,B,C A,B,C

$P(A) = 0.8, P(B) = 0.9, P(C) = 0.9$

N_1 N_1 $P_1 = P(N_1) = P(ABC)$

A,B,C

$P_1 = P(A)P(B)P(C) = 0.8 \times 0.9 \times 0.9 = 0.648$

N_2 N_2

$P_2 = P(N_2) = P\left(A \cap \left(B \cup C\right)\right)$

A,B,C

$$
\begin{aligned}
P_2 &= P(A) \cdot [1 - P(\overline{B}) \cdot P(\overline{C})] = P(A)\left[1 - \left(1 - P(B)\right)\left(1 - P(C)\right)\right] \\
&= 0.8 \times \left[1 - 0.1 \times 0.1\right] = 0.792
\end{aligned}
$$