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(Research and Development)

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1.) 2.) **3.)** 4.)

- 5.) - 6.)

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		( )					$\bar{X}$	
		1	2	3	4	5		
1	1							
	1.1	+1	+1	+1	+1	+1	1.0	
	1.2	+1	+1	+1	+1	+1	1.0	
	13	+1	+1	+1	+1	+1	1.0	
	1.4	+1	+1	+1	+1	+1	1.0	
	1.5	0	+1	0	+1	+1	0.6	
2								
	21	+1	+1	+1	+1	+1	1.0	
	22	+1	+1	+1	+1	+1	1.0	
	2.3	+1	+1	+1	+1	+1	1.0	
3								
	3.1 4							
	3.1.1	+1	+1	+1	+1	+1	1.0	
	3.1.2	+1	+1	+1	+1	+1	1.0	
	3.1.3	+1	+1	+1	+1	+1	1.0	
	3.1.4	+1	+1	+1	+1	+1	1.0	
	3.2	+1	+1	+1	+1	+1	1.0	
	( ) 10							
	3.3	+1	+1	+1	+1	+1	1.0	
	3.4	+1	+1	+1	+1	+1	1.0	

4 5

0.6-1.0

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		( )					$\bar{X}$	
		1	2	3	4	5		
1		5	5	5	5	5	5.0	
2		5	5	5	5	5	5.0	
3		4	4	4	5	5	4.4	
4		5	5	5	5	5	5.0	
5		5	5	5	5	4	4.8	
6		5	5	5	5	5	5.0	
7		4	5	5	5	5	4.8	
8		5	5	5	5	5	5.0	
9		**4**	**5**	**5**	**5**	**5**	**48**	
10		5	5	5	5	5	5.0	

5 5

- 4.4-5.0

1.2

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1.) 3

2.)

1 **80/80**

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1 **80/80 (E_1/E_2)**

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	(**5**)				
	1	2	3	4	**(10)**
1	4	4	4	5	8
2	3	4	5	4	9
3	5	3	4	5	9
4	5	4	3	3	7
5	4	4	4	4	8
6	4	3	4	5	9
7	4	4	5	4	8
8	3	4	4	5	9
9	4	5	4	5	10
	36	35	37	40	77
$\bar{X}$	4.00	3.89	4.11	4.44	8.56
S.D.	.71	.60	.71	.73	.88
	4.11				8.56
	82.22				85.56

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4.11 82.22 8.56

85.56 **82.22/85.56**

80/80 (E_1/E_2)

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	N	$\bar{X}$	S.D.	df	t-test	t(value)
	22	4.22	.69	21	32.402**	.000
	22	8.45	.80			

**<.01

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	1		2		3		4		$\bar{X}$	S.D.
	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.	$\bar{X}$	S.D.		
1.	2.82	.39	2.64	.49	2.73	.46	2.64	.49	2.71	0.46
2.	2.00	1.02	2.18	1.00	2.82	.39	2.95	.21	2.49	0.66
3.	2.36	.49	2.55	.51	2.64	.49	2.41	.50	2.49	0.50
4.	2.82	.39	2.82	.39	2.64	.49	2.95	.21	2.81	0.37
5.	3.00	.00	3.00	.00	3.00	.00	3.00	.00	3.00	0.00
6.	2.23	.69	2.50	.59	2.64	.49	2.41	.50	2.41	0.57
7.	2.14	.71	1.86	.77	2.54	.51	2.36	.49	2.23	0.62
8. /	2.86	.35	2.95	.21	3.00	.00	3.00	.00	2.95	0.14
9.	2.64	.49	2.45	.51	2.36	.49	2.59	.50	2.51	0.50
10.	2.50	.51	2.41	.50	2.36	.49	2.59	.50	2.47	0.50
11.	2.50	.51	2.59	.50	2.63	.49	2.41	.50	2.53	0.50
12.	2.68	.47	2.59	.50	2.72	.46	2.64	.49	2.66	0.48
13.	2.64	.79	2.64	.79	2.86	.35	2.95	.21	2.77	0.54

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		$\bar{X}$	**SD.**	
1		2.82	.39	
2		2.64	.49	
3		2.64	.58	
		2.70	.49	

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2.70 .49

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