

Sampling exercise

- ⦿ Download excel file from Blackboard to your computer
- ⦿ Create a:
 - **Random sample** ($n = 10$, $n = 15$)
 - **Systematic sample** ($n = 10$, $n = 15$)
 - **Convenient sample** ($n = 10$)
- ⦿ Dump the results for your sample into the google spreadsheet named “sampling” (link [Link](#) you received)
- ⦿ Compare how different are the numbers from the known population value

number	name	gender	age
1	Johnny Adams	M	64
2	Fred Alexander	M	18
3	Kathy Anderson	F	57
4	Larry Barnes	M	30
5	Hasem Basaleh	M	38
6	Tom Baxter	M	31
7	Barry Biddlecomb	M	52
8	Don Campbell	M	42
9	Martha Carr	F	21
10	Eugene Davis	M	21
11	Marion Dunn	F	55
12	James East	M	44
13	Greg Ellis	M	50
14	Alex Evans	M	65
15	Donna Faircloth	F	27
16	Barbara Flowers	F	37
17	Kirk Garner	M	37
18	Marie Gaylord	F	46
19	William Gilder	M	30
20	Mark Harris	M	63
21	Scott House	M	21
22	Ian Hoffman	F	60
23	Robert Johnson	M	43
24	John Jones	M	18
25	John Locke	M	52
26	Carlton Lawless	M	35
27	Pam Mackey	F	35
28	Ronald May	M	20
29	Mike McNuty	M	64
30	John Mills	M	19
31	Doug Morgan	M	33
32	Jean Neal	F	33
33	Anh Nguyen	M	40
34	David Payne	M	57
35	Susan Poole	F	28
36	Brenda Prine	F	38
37	Andrea Quinn	F	30
38	Mohamed Rashid	M	64
39	Anneke Reeves	F	32
40	Charlie Rogers	M	46
41	Beth Sanders	F	63
42	Lena Schmitt	F	33
43	Cindy Scott	F	31
44	Sam Shepherd	M	20
45	Max Smart	M	47
46	Rhonda Smith	F	23
47	Kin Sullivan	F	29
48	Jimmy Thompson	M	42
49	Susan Tyler	F	23
50	Lisa Turner	F	57
51	Velma Vandenberg	F	43
52	Richard Viatle	M	20
53	Larry Watson	M	26
54	Melvin White	M	29
55	MarkWiggins	M	46
56	Leon Wilson	M	31
57	Andrew Young	M	39
58	Hun Yu	F	51
59	Alex Zellars	F	42
60	Ellen Zimmer	F	46
AVERAGE			38.95
STANDARD DEVIATION			13.9228
MALE PROPORTION			0.6

RANDOM SAMPLE (10)				random number generator:	
number	name	gender	age		
4	Larry Barnes	M	30		
18	Marie Gaylord	F	46		
25	John Locke	M	52		
28	Ronald May	M	20		
37	Andrea Quinn	F	30		
51	Velma Vandenberg	F	43		
54	Melvin White	M	29		
55	MarkWiggins	M	46		
57	Andrew Young	M	39		
60	Ellen Zimmer	F	46		
SAMPLE AVERAGE			6	38.1	
SAMPLE STANDARD DEVIATION				10.257247	
MALE PROPORTION				0.6	

SYSTEMATIC SAMPLE (10)				
number	name	gender	age	
22	Ian Hoffman	F	60	
27	Pam Mackey	F	35	
32	Jean Neal	F	33	
37	Andrea Quinn	F	30	
42	Lena Schmitt	F	33	
47	Kin Sullivan	F	29	
52	Richard Viatle	M	20	
57	Andrew Young	M	39	
2	Fred Alexander	M	18	
7	Barry Biddlecomb	M	52	
SAMPLE AVERAGE			4	34.9
SAMPLE STANDARD DEVIATION				12.965338
MALE PROPORTION				0.4

RANDOM SAMPLE (15)			
number	name	gender	age
4	Larry Barnes	M	30
8	Don Campbell	M	42
14	Alex Evans	M	65
16	Barbara Flowers	F	37
19	William Gilder	M	30
22	Ian Hoffman	F	60
25	John Locke	M	52
26	Carlton Lawless	M	35
34	David Payne	M	57
37	Andrea Quinn	F	30
40	Charlie Rogers	M	46
43	Cindy Scott	F	31
46	Rhonda Smith	F	23
48	Jimmy Thompson	M	42
51	Velma Vandenberg	F	43
SAMPLE AVERAGE		0	41.533333
SAMPLE STANDARD DEVIATION			12.477779
MALE PROPORTION			0

SYSTEMATIC SAMPLE (15)			
number	name	gender	age
44	Sam Shepherd	M	20
49	Susan Tyler	F	23
54	Melvin White	M	29
59	Alex Zellars	F	42
4	Larry Barnes	M	30
9	Martha Carr	F	21
14	Alex Evans	M	65
19	William Gilder	M	30
24	John Jones	M	18
29	Mike McNuty	M	64
34	David Payne	M	57
39	Anneke Reeves	F	32
44	Sam Shepherd	M	20
49	Susan Tyler	F	23
54	Melvin White	M	29
SAMPLE AVERAGE			10 34.2
SAMPLE STANDARD DEVIATION			16.026169
MALE PROPORTION			0.6666667

<http://randomizer.org/form.htm>

POPULATION AVERAGE	38.95
STANDARD DEVIATION	13.92282
MALE PROPORTION	0.6

CONVENIENCE SAMPLE (10)				
number	name	gender	age	
	25 John Locke	M		52
	26 Carlton Lawless	M		35
	27 Pam Mackey	F		35
	28 Ronald May	M		20
	29 Mike McNuty	M		64
	30 John Mills	M		19
	31 Doug Morgan	M		33
	32 Jean Neal	F		33
	33 Anh Nguyen	M		40
	34 David Payne	M		57
SAMPLE AVERAGE			8	38.8
SAMPLE STANDARD DEVIATION				14.845875
MALE PROPORTION				0.8

POPULATION AVERAGE	38.95
STANDARD DEVIATION	13.92282
MALE PROPORTION	0.6

POPULATION AVERAGE	38.95
STANDARD DEVIATION	13.92282
MALE PROPORTION	0.6

SAMPLE SIZE: 10

RANDOM		SYSTEMATIC	
SAMPLE	AVERAGE	SAMPLE	AVERAGE
Antonio	42.9	Antonio	36.5
	38.5		36
	38		38.2
	46.1		33.6
	35.9		40.5
	35.8		42.6
	39.7		33.2
	38.1		43.5
	35.7		38.2
	39		39.8
	40.6		34.9
	39.1		38.6
	37.7		37.9
	35.4		39.8
	40.2		39.8
	38.1		34.9
	38.6		39.8
	44.6		33.6
	38.5		33.4

AVERAGE	39.078947
ST_DEV	2.8870552
LOWER 95% C.I.	37.289532
UPPER 95% C.I.	40.868363

AVERAGE	37.621053
ST_DEV	3.133436
LOWER 95% C.I.	35.678929
UPPER 95% C.I.	39.563176

SAMPLE SIZE: 15

RANDOM		SYSTEMATIC	
SAMPLE	AVERAGE	SAMPLE	AVERAGE
Antonio	35.6	Antonio	37.1
	37.4		41.6
	38.3		44.2
	41.7		36.1
	41.8		46
	37.47		33.2
	30.3		37.7
	43.4		36.1
	41.9		40.5
	38.4		38.8
	29.9		37.1
	34.5		37.9
	45.6		38.8
	41.73		33.93
	41.53		34.2
	41		41.3
	31.5		38.8
	32.9		37.3

AVERAGE	38.051667
ST_DEV	4.713227
LOWER 95% C.I.	35.666445
UPPER 95% C.I.	40.436889

AVERAGE	38.368333
ST_DEV	3.391103
LOWER 95% C.I.	36.652198
UPPER 95% C.I.	40.084468

CONVENIENCE

SAMPLE	AVERAGE
Antonio	37.4
	40.5
	43.6
	40.5
	36.4
	37.4
	40.1
	42
	40.7
	38.2
	39.2
	40.3
	41.2
	45.4
	41.2
	38.8
	38.2
	38.5

AVERAGE	39.175
ST_DEV	1.3720423
LOWER 95% C.I.	38.324599
UPPER 95% C.I.	40.025401