Ten rows and five columns
of the fat data set

Obs	case	fat_brozek	fat_siri	dens	age
1	1	12.6	12.3	1.0708	23
2	2	6.9	6.1	1.0853	22
3	3	24.6	25.3	1.0414	22
4	4	10.9	10.4	1.0751	26
5	5	27.8	28.7	1.0340	24
6	6	20.6	20.9	1.0502	24
7	7	19.0	19.2	1.0549	26
8	8	12.8	12.4	1.0704	25
9	9	5.1	4.1	1.0900	25
10	10	12.0	11.7	1.0722	23

Internal description of fat dataset

The CONTENTS Procedure

Data Set Name	INTRO.FAT	Observations	252
Member Type	DATA	Variables	19
Engine	V9	Indexes	0
Created	06/16/2022 13:50:26	Observation Length	152
Last Modified	06/16/2022 13:50:26	Deleted Observations	0
Protection		Compressed	NO
Data Set Type		Sorted	NO
Label			
Data Representation	WINDOWS_64		
Encoding	wlatin1 Western (Windows)		

Internal description of fat dataset

The CONTENTS Procedure

Engine/Host Dependent Information	
Data Set Page Size	65536
Number of Data Set Pages	1
First Data Page	1
Max Obs per Page	430
Obs in First Data Page	252
Number of Data Set Repairs	0
ExtendObsCounter	YES
Filename	q:\introduction-to-sas\data\fat.sas7bdat
Release Created	9.0401M3
Host Created	X64_8PRO

Internal description of fat dataset

The CONTENTS Procedure

Alphabetic List of Variables and Attributes			
#	**Variable**	**Type**	**Len**	**Label**
12	abdomen	Num	8	Abdomen circumference (cm)
5	age	Num	8	Age (yrs)
16	ankle	Num	8	Ankle circumference (cm)
17	biceps	Num	8	Biceps circumference (cm)
8	bmi	Num	8	Body mass index (kg/m^2)
1	case	Num	8	Case number
11	chest	Num	8	Chest circumference (cm)
4	dens	Num	8	Density
2	fat_brozek	Num	8	Fat (Brozek's equation)
3	fat_siri	Num	8	Fat (Siri's equation)

Internal description of fat dataset

The CONTENTS Procedure

Alphabetic List of Variables and Attributes			
#	**Variable**	**Type**	**Len**	**Label**
9	ffw	Num	8	Fat Free Weight (lbs)
18	forearm	Num	8	Forearm circumference (cm)
13	hip	Num	8	Hip circumference (cm)
7	ht	Num	8	Height (inches)
15	knee	Num	8	Knee circumference (cm)
10	neck	Num	8	Neck circumference (cm)
14	thigh	Num	8	Thigh circumference (cm)
19	wrist	Num	8	Wrist circumference (cm)
6	wt	Num	8	Weight (lbs)

Descriptive statistics for ht
Notice the unusual minimum

The MEANS Procedure

Analysis Variable : ht Height (inches)				
N	**Mean**	**Std Dev**	**Minimum**	**Maximum**
252	70.1488095	3.6628558	29.5000000	77.7500000

The row with the smallest ht
Note the inconsistency with wt

Obs	case	fat_brozek	fat_siri	dens	age	wt	ht	bmi	ffw	neck	chest
1	42	31.7	32.9	1.025	44	205	29.5	29.9	140.1	36.6	106

Obs	abdomen	hip	thigh	knee	ankle	biceps	forearm	wrist
1	104.3	115.5	70.6	42.5	23.7	33.6	28.7	17.4

The row with the largest ht
This seems quite normal to me

Obs	case	fat_brozek	fat_siri	dens	age	wt	ht	bmi	ffw	neck	chest
1	96	17.3	17.4	1.0991	53	224.5	77.75	26.1	185.7	41.1	113.2

Obs	abdomen	hip	thigh	knee	ankle	biceps	forearm	wrist
1	99.2	107.5	61.7	42.3	23.2	32.9	30.8	20.4

Internal description of fat dataset

The CONTENTS Procedure

Data Set Name	INTRO.FAT	**Observations**	252
Member Type	DATA	**Variables**	19
Engine	V9	**Indexes**	0
Created	06/16/2022 13:50:27	**Observation Length**	152
Last Modified	06/16/2022 13:50:27	**Deleted Observations**	0
Protection		**Compressed**	NO
Data Set Type		**Sorted**	YES
Label			
Data Representation	WINDOWS_64		
Encoding	wlatin1 Western (Windows)		

Internal description of fat dataset

The CONTENTS Procedure

Engine/Host Dependent Information	
Data Set Page Size	65536
Number of Data Set Pages	1
First Data Page	1
Max Obs per Page	430
Obs in First Data Page	252
Number of Data Set Repairs	0
ExtendObsCounter	YES
Filename	q:\introduction-to-sas\data\fat.sas7bdat
Release Created	9.0401M3
Host Created	X64_8PRO

Internal description of fat dataset

The CONTENTS Procedure

Alphabetic List of Variables and Attributes			
#	**Variable**	**Type**	**Len**	**Label**
12	abdomen	Num	8	Abdomen circumference (cm)
5	age	Num	8	Age (yrs)
16	ankle	Num	8	Ankle circumference (cm)
17	biceps	Num	8	Biceps circumference (cm)
8	bmi	Num	8	Body mass index (kg/m^2)
1	case	Num	8	Case number
11	chest	Num	8	Chest circumference (cm)
4	dens	Num	8	Density
2	fat_brozek	Num	8	Fat (Brozek's equation)
3	fat_siri	Num	8	Fat (Siri's equation)

Internal description of fat dataset

The CONTENTS Procedure

Alphabetic List of Variables and Attributes			
#	**Variable**	**Type**	**Len**	**Label**
9	ffw	Num	8	Fat Free Weight (lbs)
18	forearm	Num	8	Forearm circumference (cm)
13	hip	Num	8	Hip circumference (cm)
7	ht	Num	8	Height (inches)
15	knee	Num	8	Knee circumference (cm)
10	neck	Num	8	Neck circumference (cm)
14	thigh	Num	8	Thigh circumference (cm)
19	wrist	Num	8	Wrist circumference (cm)
6	wt	Num	8	Weight (lbs)

Internal description of fat dataset

The CONTENTS Procedure

Sort Information	
Sortedby	DESCENDING ht
Validated	YES
Character Set	ANSI

ht < 0 will include ht = .

Obs	case	fat_brozek	fat_siri	dens	age	wt	ht	bmi	ffw	neck	chest
252	42	31.7	32.9	1.025	44	205	.	29.9	140.1	36.6	106

Obs	abdomen	hip	thigh	knee	ankle	biceps	forearm	wrist
252	104.3	115.5	70.6	42.5	23.7	33.6	28.7	17.4

Using the nmiss statistic

The MEANS Procedure

Analysis Variable : ht Height (inches)					
N	N Miss	Mean	Std Dev	Minimum	Maximum
251	1	70.3107570	2.6142960	64.0000000	77.7500000

Original and converted units

Obs	ht	ht_cm	wt	wt_kg
1	77.75	197.49	224.50	102.05
2	77.50	196.85	188.15	85.52
3	76.00	193.04	216.00	98.18
4	76.00	193.04	244.25	111.02
5	75.50	191.77	194.00	88.18
6	75.25	191.14	171.50	77.95
7	75.00	190.50	212.75	96.70
8	74.75	189.87	210.25	95.57
9	74.75	189.87	224.75	102.16
10	74.50	189.23	186.25	84.66

Histogram with default bins

Histogram with narrow bins

Histogram with wide bins
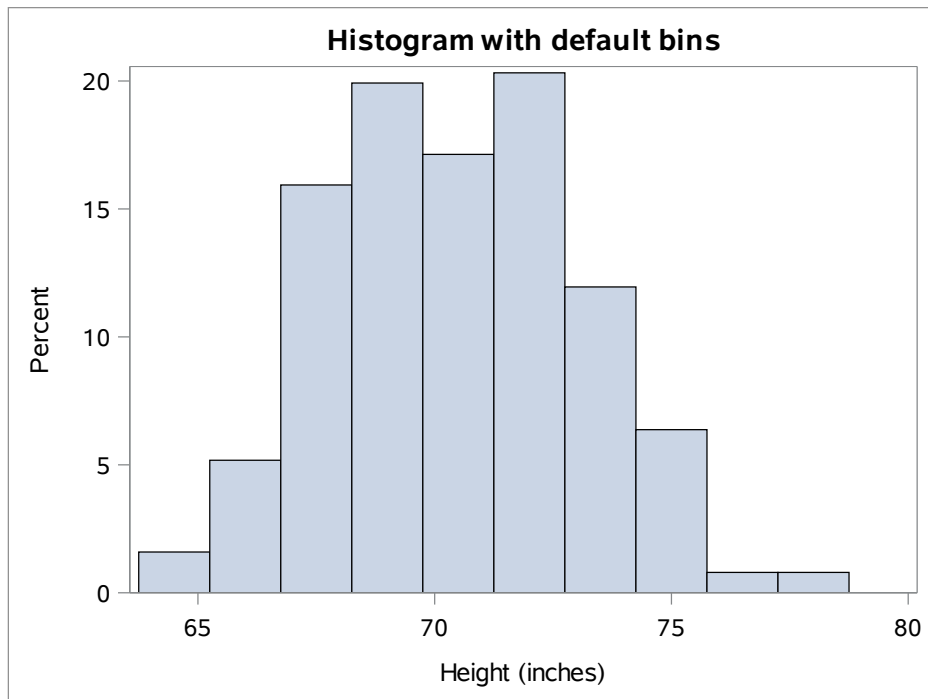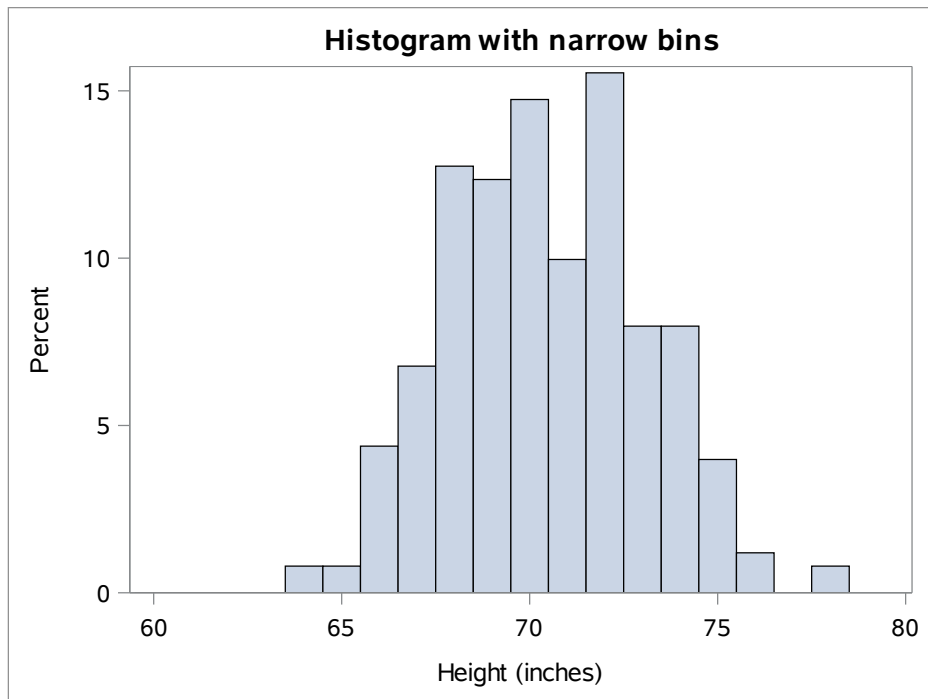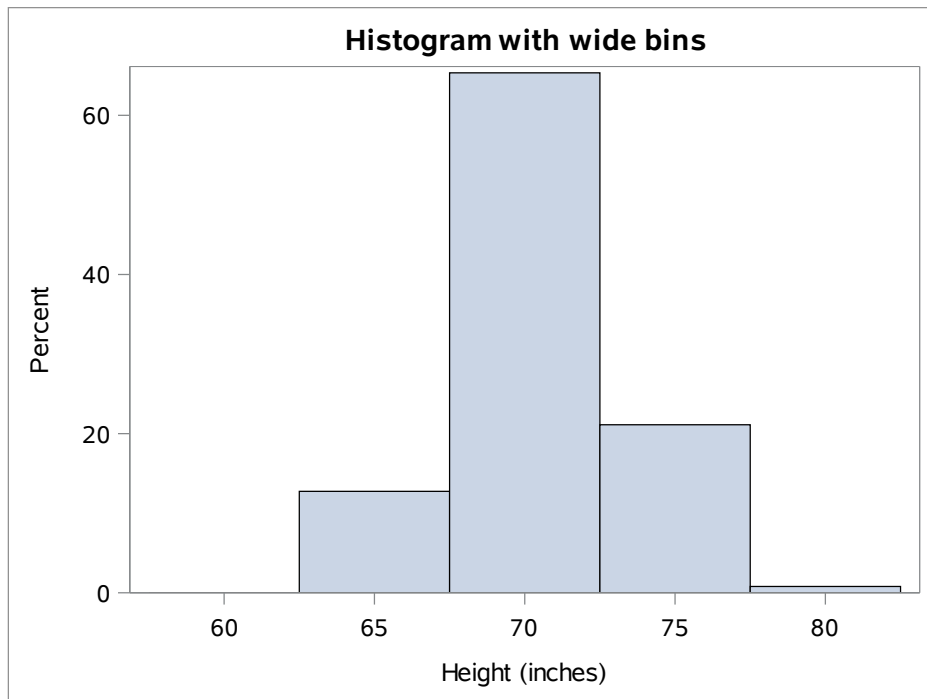
The CORR Procedure

10 With Variables:	neck chest abdomen hip thigh knee ankle biceps forearm wrist
2 Variables:	fat_brozek fat_siri

Pearson Correlation Coefficients, N = 252		
	fat_brozek	**fat_siri**
neck Neck circumference (cm)	0.49149	0.49059
chest Chest circumference (cm)	0.70289	0.70262
abdomen Abdomen circumference (cm)	0.81371	0.81343
hip Hip circumference (cm)	0.62570	0.62520
thigh Thigh circumference (cm)	0.56128	0.55961

The CORR Procedure

Pearson Correlation Coefficients, N = 252		
	fat_brozek	**fat_siri**
knee Knee circumference (cm)	0.50779	0.50867
ankle Ankle circumference (cm)	0.26678	0.26597
biceps Biceps circumference (cm)	0.49303	0.49327
forearm Forearm circumference (cm)	0.36328	0.36139
wrist Wrist circumference (cm)	0.34757	0.34657

Correlation matrix output to a data set

Obs	_TYPE_	_NAME_	fat_brozek	fat_siri
1	MEAN		18.938	19.151
2	STD		7.751	8.369
3	N		252.000	252.000
4	CORR	neck	0.491	0.491
5	CORR	chest	0.703	0.703
6	CORR	abdomen	0.814	0.813
7	CORR	hip	0.626	0.625
8	CORR	thigh	0.561	0.560
9	CORR	knee	0.508	0.509
10	CORR	ankle	0.267	0.266
11	CORR	biceps	0.493	0.493

Correlation matrix output to a data set

Obs	_TYPE_	_NAME_	fat_brozek	fat_siri
12	CORR	forearm	0.363	0.361
13	CORR	wrist	0.348	0.347

Rounded and re-ordered correlation matrix

Obs	_NAME_	fat_brozek	fat_siri
1	abdomen	81	81
2	chest	70	70
3	hip	63	63
4	thigh	56	56
5	knee	51	51
6	neck	49	49
7	biceps	49	49
8	forearm	36	36
9	wrist	35	35
10	ankle	27	27

Simple scatterplot

Simple scatterplot
with linear trend

Simple scatterplot
with a smooth curve