

### Periode 1. september til 19 november 2012.

	Allan	Bente	Finn	Henrik	Kim	Morten	Niels	Pia	Rene	Svend	Tommy	Winnie
AVG	132,3	125,2	153,0	137,9	125,1	150,9	153,8	132,8	129,8	145,1	133,2	152,1
STD	18,7	20,6	18,1	21,6	18,9	16,1	20,5	21,4	29,6	15,6	22,0	19,7
STD %	14,2	16,4	11,8	15,7	15,1	10,7	13,3	16,1	22,8	10,8	16,6	13,0
Upper 95%	139	135	161	148	136	158	162	144	155	153	143	160
Lower 95%	125	115	145	128	114	143	146	122	105	137	123	144
±	7	10	8	10	11	7,5	8	11	25	8	10	8

**STD %** viser hvor konstant, eller præcis, man er i sit spil, og udtrykt som procent, kan det sammenlignes på tværs af personer.

Morten er den der har det mest konstante spil, da hans afvigelse fra gennemsnittet kun er 10,7 %, eller cirka halvdelen på hver sin side af gennemsnittet. Så Mortens score kan udtrykkes som noget i retning af  $151 \pm 7,5$  (151 er gennemsnittet; 7,5 er halvdelen af 10,7 % af gennemsnittet)

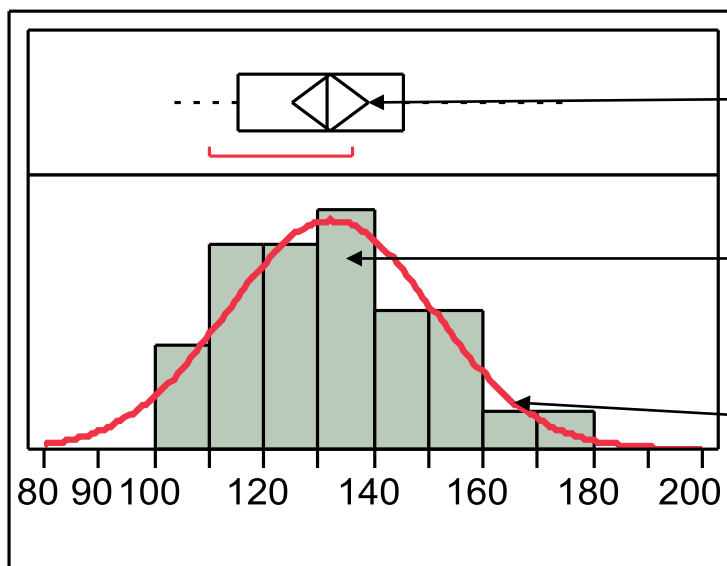
Antallet af spillet runder, er inde i spredningen, og et mere præcist tal er at sige at Morten med 95 % sandsynlighed, vil spille mellem 143 og 158 i næste runde, som kan aflæses i Upper 95 % og Lower 95 %, eller ca.  $151 \pm 7,5$ .

Dette kan ses i nederste del af tabellen, og aflæses f.eks. Niels score kan den udtrykkes som  $154 \pm 8$ , eller mellem 146 og 162 pr spil.

Baseret på almindelig gennemsnit, vil Pia være højere placeret end Allan. Men da Allan har spillet flere kampe (32) end Pia (17) er hans gennemsnit bedre bestemt, og det betyder at Allans "Lower 95%" er højere end Pia's, så baseret på en vægtet gennemsnit, ligger Allan højere placeret end Pia. Faktisk rykker Allan fra en 9 plads efter alm. gennemsnit til en 7 plads efter vægtet gennemsnit.

	Allan	Bente	Finn	Henrik	Kim	Morten	Niels	Pia	Rene	Svend	Tommy	Winnie
Placering gennemsnit	9	11	2	6	12	4	1	8	10	5	7	3
Placering Lower 95%	7	10	2	6	11	4	1	9	12	5	8	3

## Distributions Allan



Allan vil i næste spil, med 95 % sandsynlighed, score mellem 125,5 og 139 kegler pr. serie

De grønne stolper viser hyppigheden af score, og her scorer Allan hyppigst mellem 130 og 140 kegler/serie. Den forventede fordeling er vist med en rød kurve.

Normal(132.25,18.7479)

### Quantiles

100.0%	maximum	176
99.5%		176
97.5%		176
90.0%		158.7
75.0%	quartile	145.75
50.0%	median	131.5
25.0%	quartile	115.25
10.0%		107.2
2.5%		102
0.5%		102
0.0%	minimum	102

Fraktiler angiver i hvor mange procent af tilfældene, at der scores en bestemt score eller mindre.

75 % fraktilen fortæller at Allen har scoret 145.75 kegler/serie eller mindre i 75 % af de gange han har spillet.

### Moments

Mean	132.25
Std Dev	18.747903
Std Err Mean	3.3141924
Upper 95% Mean	139.00934
Lower 95% Mean	125.49066
N	32

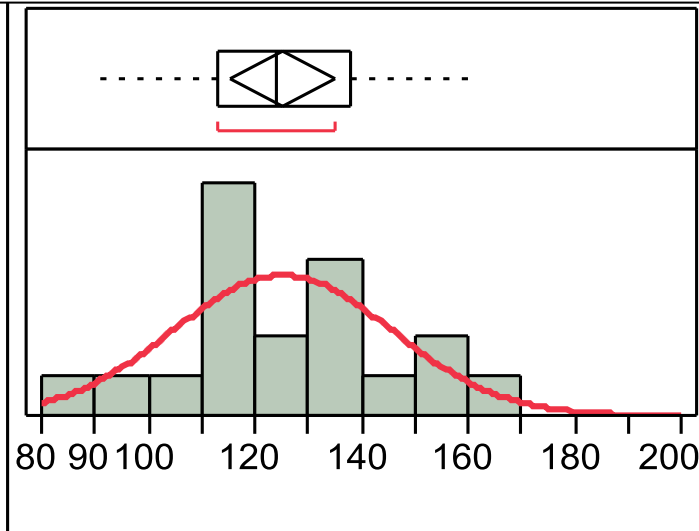
Gennemsnit af alle spil (32 stk) er 132,25

### Fitted Normal

#### Parameter Estimates

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	132.25	125.49066	139.00934
Dispersion	$\sigma$	18.747903	15.030257	24.924954

**Spredningen** fortæller hvor konstant Allan er i sit spil. En lille spredning fortæller man er meget konstant i sit spil. Spredningen afhænger af gennemsnit og antal kampe man har spillet, og tallet kan kun sammenlignes med andres hvis man udtrykker i % af gennemsnittet, her  $18,75/132,25 = 14,2\%$ .



Normal(125.211,20.5739)

### Quantiles

100.0%	maximum	161
99.5%		161
97.5%		161
90.0%		154
75.0%	quartile	138
50.0%	median	124
25.0%	quartile	113
10.0%		91
2.5%		89
0.5%		89
0.0%	minimum	89

### Moments

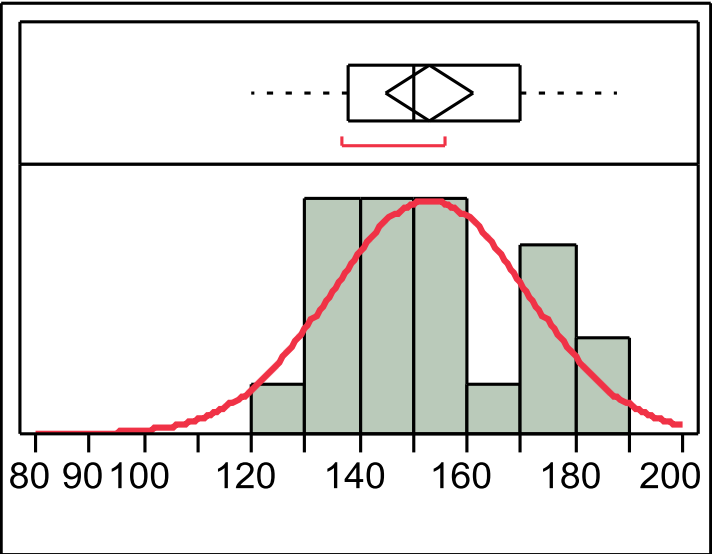
Mean	125.21053
Std Dev	20.573929
Std Err Mean	4.719983
Upper 95% Mean	135.12684
Lower 95% Mean	115.29421
N	19

### Fitted Normal

#### Parameter Estimates

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	125.21053	115.29421	135.12684
Dispersion	$\sigma$	20.573929	15.545921	30.425231

Finn



Normal(153.043,18.1245)

Quantiles

100.0%	maximum	188
99.5%		188
97.5%		188
90.0%		182.4
75.0%	quartile	170
50.0%	median	150
25.0%	quartile	138
10.0%		132.4
2.5%		120
0.5%		120
0.0%	minimum	120

Moments

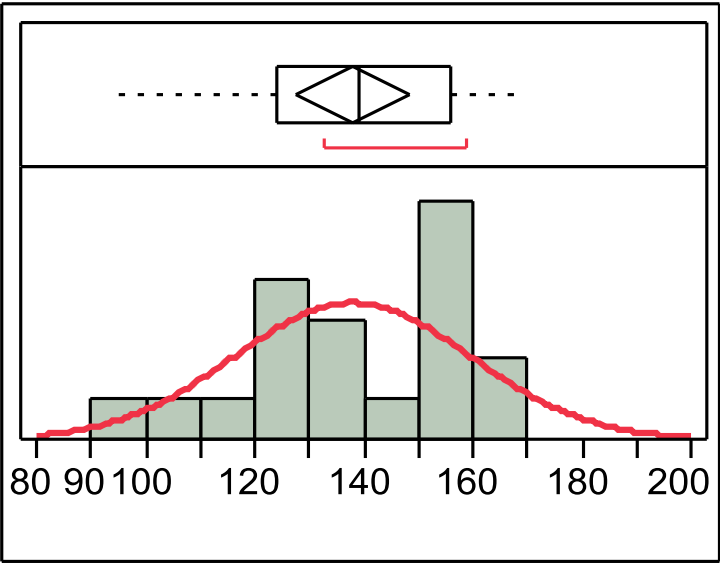
Mean	153.04348
Std Dev	18.124514
Std Err Mean	3.7792225
Upper 95% Mean	160.88111
Lower 95% Mean	145.20585
N	23

Fitted Normal

Parameter Estimates

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	153.04348	145.20585	160.88111
Dispersion	$\sigma$	18.124514	14.017406	25.652557

Henrik



Normal(137.947,21.6294)

Quantiles

100.0%	maximum	168
99.5%		168
97.5%		168
90.0%		168
75.0%	quartile	156
50.0%	median	139
25.0%	quartile	124
10.0%		100
2.5%		94
0.5%		94
0.0%	minimum	94

Moments

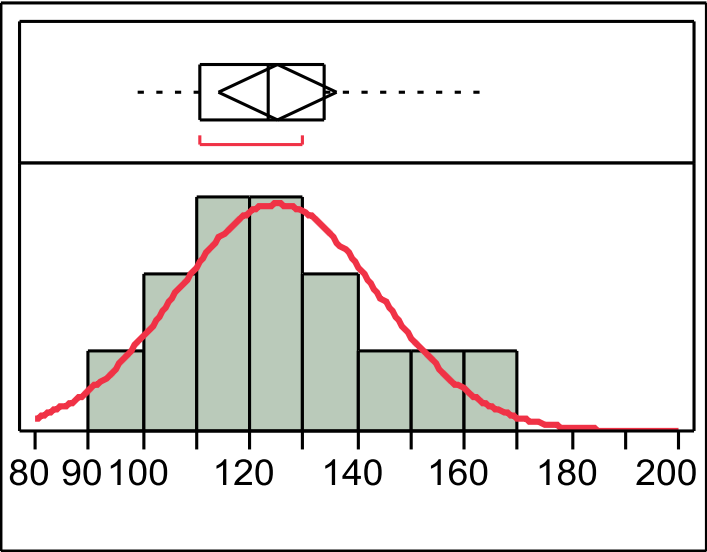
Mean	137.94737
Std Dev	21.629388
Std Err Mean	4.9621218
Upper 95% Mean	148.3724
Lower 95% Mean	127.52234
N	19

Fitted Normal

Parameter Estimates

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	137.94737	127.52234	148.3724
Dispersion	$\sigma$	21.629388	16.343439	31.986069

Kim



Normal(125.143,18.8715)

Quantiles

100.0%	maximum	163
99.5%		163
97.5%		163
90.0%		159
75.0%	quartile	133.75
50.0%	median	123.5
25.0%	quartile	110.5
10.0%		100.5
2.5%		97
0.5%		97
0.0%	minimum	97

Moments

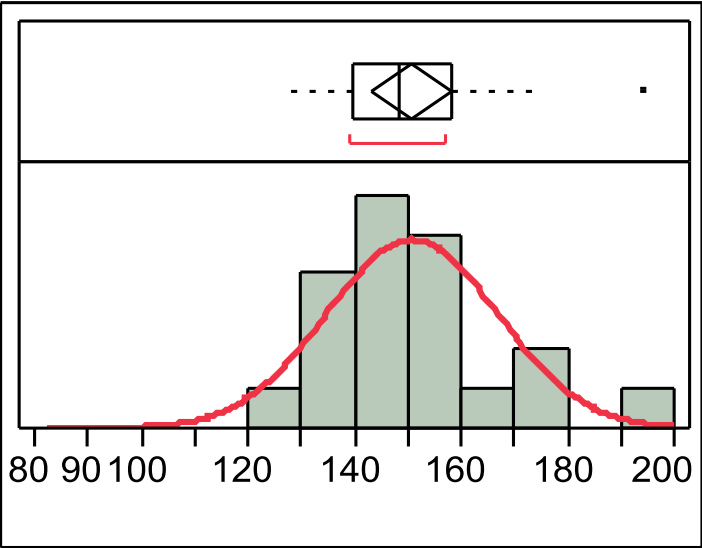
Mean	125.14286
Std Dev	18.871456
Std Err Mean	5.0436089
Upper 95% Mean	136.03891
Lower 95% Mean	114.2468
N	14

Fitted Normal

Parameter Estimates

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	125.14286	114.2468	136.03891
Dispersion	$\sigma$	18.871456	13.680937	30.402717

Morten



Normal(150.85,16.1156)

Quantiles

100.0%	maximum	194
99.5%		194
97.5%		194
90.0%		173.7
75.0%	quartile	158.5
50.0%	median	148.5
25.0%	quartile	139.5
10.0%		131.1
2.5%		127
0.5%		127
0.0%	minimum	127

Moments

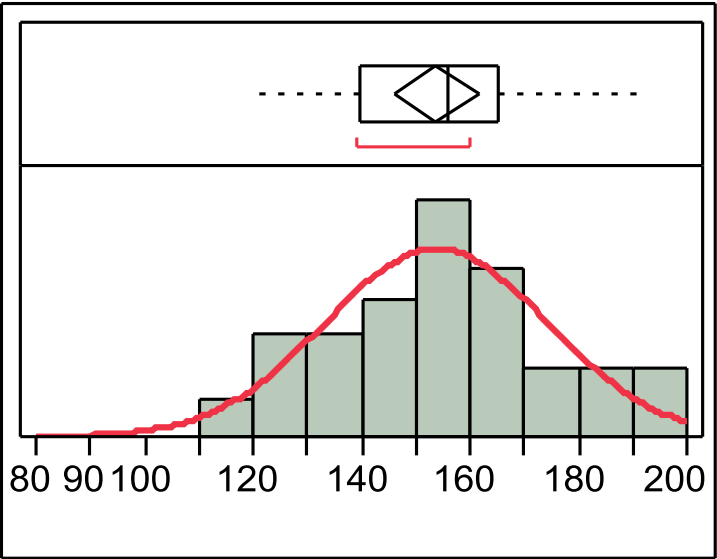
Mean	150.85
Std Dev	16.115618
Std Err Mean	3.6035618
Upper 95% Mean	158.39234
Lower 95% Mean	143.30766
N	20

Fitted Normal

Parameter Estimates

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	150.85	143.30766	158.39234
Dispersion	$\sigma$	16.115618	12.255773	23.538015

Niels



Normal(153.793,20.4736)

Quantiles

100.0%	maximum	192
99.5%		192
97.5%		192
90.0%		188
75.0%	quartile	165.5
50.0%	median	156
25.0%	quartile	139.5
10.0%		122
2.5%		119
0.5%		119
0.0%	minimum	119

Moments

Mean	153.7931
Std Dev	20.47364
Std Err Mean	3.8018596
Upper 95% Mean	161.58086
Lower 95% Mean	146.00535
N	29

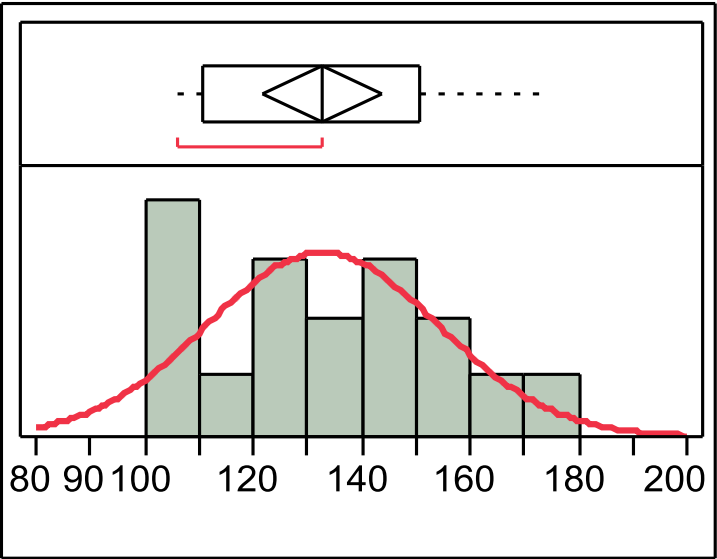
Fitted Normal

Parameter Estimates

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	153.7931	146.00535	161.58086
Dispersion	$\sigma$	20.47364	16.247461	27.68961



Pia



Normal(132.824,21.3987)

Quantiles

100.0%	maximum	173
99.5%		173
97.5%		173
90.0%		166.6
75.0%	quartile	150.5
50.0%	median	133
25.0%	quartile	111
10.0%		105.8
2.5%		105
0.5%		105
0.0%	minimum	105

Moments

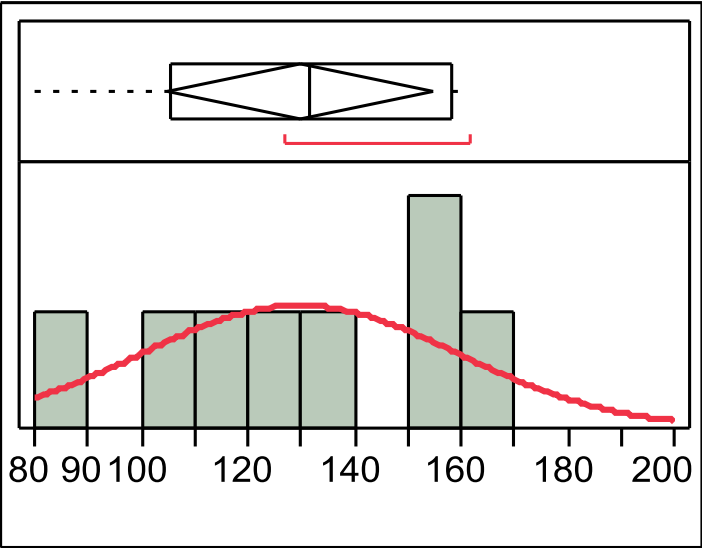
Mean	132.82353
Std Dev	21.398701
Std Err Mean	5.1899474
Upper 95% Mean	143.82573
Lower 95% Mean	121.82133
N	17

Fitted Normal

Parameter Estimates

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	132.82353	121.82133	143.82573
Dispersion	$\sigma$	21.398701	15.937107	32.567303

Rene



Normal(129.75,29.6347)

Quantiles

100.0%	maximum	162
99.5%		162
97.5%		162
90.0%		162
75.0%	quartile	158.5
50.0%	median	131.5
25.0%	quartile	105.25
10.0%		80
2.5%		80
0.5%		80
0.0%	minimum	80

Moments

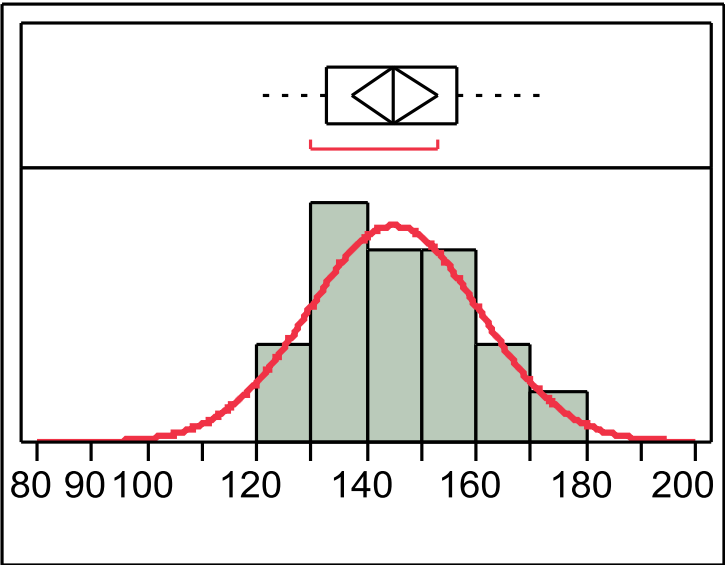
Mean	129.75
Std Dev	29.63468
Std Err Mean	10.477442
Upper 95% Mean	154.52521
Lower 95% Mean	104.97479
N	8

Fitted Normal

Parameter Estimates

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	129.75	104.97479	154.52521
Dispersion	$\sigma$	29.63468	19.593685	60.314638

Svend



Normal(145.056,15.6034)

Quantiles

100.0%	maximum	174
99.5%		174
97.5%		174
90.0%		169.5
75.0%	quartile	156.25
50.0%	median	145
25.0%	quartile	132.5
10.0%		121
2.5%		121
0.5%		121
0.0%	minimum	121

Moments

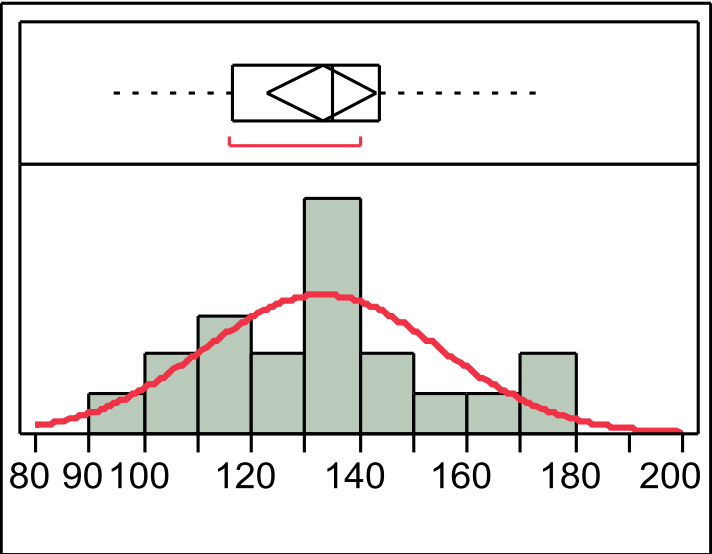
Mean	145.05556
Std Dev	15.603439
Std Err Mean	3.6777659
Upper 95% Mean	152.81496
Lower 95% Mean	137.29615
N	18

Fitted Normal

Parameter Estimates

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	145.05556	137.29615	152.81496
Dispersion	$\sigma$	15.603439	11.708627	23.391802

Tommy



Normal(133.15,22.0461)

Quantiles

100.0%	maximum	173
99.5%		173
97.5%		173
90.0%		169.5
75.0%	quartile	143.75
50.0%	median	135
25.0%	quartile	116.5
10.0%		105.1
2.5%		93
0.5%		93
0.0%	minimum	93

Moments

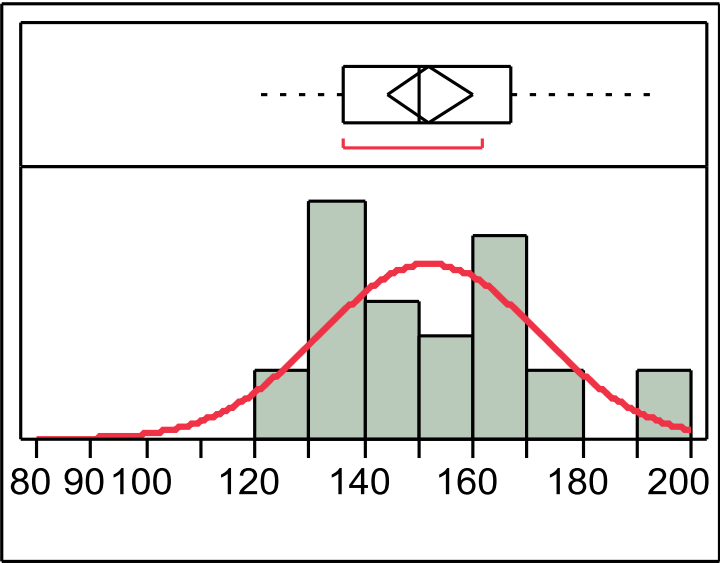
Mean	133.15
Std Dev	22.046064
Std Err Mean	4.9296498
Upper 95% Mean	143.46788
Lower 95% Mean	122.83212
N	20

Fitted Normal

Parameter Estimates

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	133.15	122.83212	143.46788
Dispersion	$\sigma$	22.046064	16.76582	32.199856

Winnie



Normal(152.115,19.7491)

Quantiles

100.0%	maximum	195
99.5%		195
97.5%		195
90.0%		180.8
75.0%	quartile	166.75
50.0%	median	150
25.0%	quartile	136
10.0%		128.2
2.5%		120
0.5%		120
0.0%	minimum	120

Moments

Mean	152.11538
Std Dev	19.74908
Std Err Mean	3.8731132
Upper 95% Mean	160.09221
Lower 95% Mean	144.13856
N	26

Fitted Normal

Parameter Estimates

Type	Parameter	Estimate	Lower 95%	Upper 95%
Location	$\mu$	152.11538	144.13856	160.09221
Dispersion	$\sigma$	19.74908	15.488361	27.261804