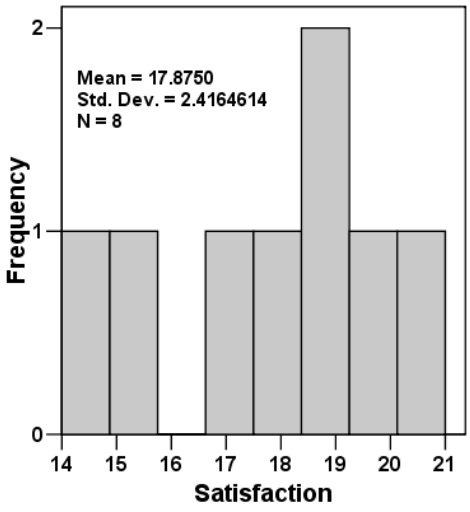
1:1 LAB RESULTS - DESCRIPTIVE STATISTICS

***1. Enter data, calculate sum and mean.**

```
DATA LIST FREE/ sat.
BEGIN DATA
20  17  19  15  19  18  14  21
END DATA.

DESCRIPTIVES sat /STATISTICS = SUM.
```

	N	Sum
SAT	8	143.0000



***2. Create a frequency distribution.**

```
FREQUENCIES sat /HISTOGRAM.
```

		Freq	Perc	Cumulative Perc
Valid	14.00	1	12.5	12.5
	15.00	1	12.5	25.0
	17.00	1	12.5	37.5
	18.00	1	12.5	50.0
	19.00	2	25.0	75.0
	20.00	1	12.5	87.5
	21.00	1	12.5	100.0
	Total	8	100.0	100.0

***3. Calculations for SS and other squared deviations.**

```
COMPUTE satdev = sat - 17.875.
COMPUTE satdev2 = satdev**2.

LIST sat satdev satdev2.
```

SAT	SATDEV	SATDEV2
20.0000	2.1250	4.5156
17.0000	-.8750	.7656
19.0000	1.1250	1.2656
15.0000	-2.8750	8.2656
19.0000	1.1250	1.2656
18.0000	.1250	.0156
14.0000	-3.8750	15.0156
21.0000	3.1250	9.7656

***Compute deviations from values other than Mean. Compare sums.**

```
COMP sdev17 = sat - 17.
COMP sdev172 = sdev17**2.
COMP sdev192 = (sat - 19)**2.

DESCR satdev sdev17 satdev2 sdev172 sdev192 /STAT = SUM.
```

	N	Sum
sdev	8	0.00
sdev17	8	7.00
sdev2	8	40.875
sdev172	8	47.00
sdev192	8	51.00

***4. Calculate variance and standard deviation. Compare to DESCRIPTIVE output.**

```
DESCRIPTIVES sat.
```

	N	Minimum	Maximum	Mean	Std. Deviation
SAT	8	14.000	21.000	17.875000	2.4164614

***5. Mean of all $\bar{y}$s = μ = 15.0, SD of $\bar{y}$s = 2.5/$\sqrt{8}$ = .88.**