

Part 1 - Answers: Percentiles & Percentile Ranks

Use Cereals File (use your cleaned up complete version of the file)

Percentiles

Obtain the 25th, 50th, 75th percentiles for the rating variable (use average of the 2 ratings)

use stats under FDT;

avgrating		
N	Valid	77
	Missing	0
Percentiles	25	33.1481
	50	40.7801
	75	51.5893

interpretation: 75% of the cereals have a rating below 52 on a scale that ranges from zero to 100. Most cereals did not have a good rating.

Percentile Ranks

What's the approximate percentile rank for the sodium value of 125 (assume low score good).

Create FDT. From cumulative frequency column you see the percent across from 125 is 24.7%. Subtract that from 100 (since a low score good) and you have the approximate percentile rank of the value 125 = 75.3%.

milligrams of sodium		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	9	11.7	11.7	11.7
	15	2	2.6	2.6	14.3
	45	1	1.3	1.3	15.6
	70	1	1.3	1.3	16.9
	75	1	1.3	1.3	18.2
	80	1	1.3	1.3	19.5
	90	1	1.3	1.3	20.8
	95	1	1.3	1.3	22.1
	125	2	2.6	2.6	24.7
	130	1	1.3	1.3	26.0

135	2	2.6	2.6	28.6
140	7	9.1	9.1	37.7
150	3	3.9	3.9	41.6
160	1	1.3	1.3	42.9
170	5	6.5	6.5	49.4
180	5	6.5	6.5	55.8
190	3	3.9	3.9	59.7
200	8	10.4	10.4	70.1
210	4	5.2	5.2	75.3
220	5	6.5	6.5	81.8
230	2	2.6	2.6	84.4
240	2	2.6	2.6	87.0
250	2	2.6	2.6	89.6
260	2	2.6	2.6	92.2
280	2	2.6	2.6	94.8
290	3	3.9	3.9	98.7
320	1	1.3	1.3	100.0
Total	77	100.0	100.0	

What cereal(s) have 125 milligrams of sodium per serving?

Select if sodium = 125
FDT Name

Name of Cereal		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Apple_Jacks	1	50.0	50.0	50.0
	Froot_Loops	1	50.0	50.0	100.0
	Total	2	100.0	100.0	

Part 2 - Answers: Percentiles & Percentile Ranks

Use hoola file

Obtain the 40th and 60th percentiles for the average hoola scores

hoola_avg		
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N	Valid	151
	Missing	0
Percentiles	40	34.9000
	60	44.6000

What's the approximate percentile rank for those with a hoola 1 score of 33?

Score 1					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	7.00	1	0.7	0.7	0.7
	8.00	2	1.3	1.3	2.0
	10.00	1	0.7	0.7	2.6
	11.00	1	0.7	0.7	3.3
	13.00	3	2.0	2.0	5.3
	14.00	2	1.3	1.3	6.6
	15.00	1	0.7	0.7	7.3
	16.00	4	2.6	2.6	9.9
	17.00	2	1.3	1.3	11.3
	18.00	2	1.3	1.3	12.6
	19.00	3	2.0	2.0	14.6
	20.00	5	3.3	3.3	17.9
	21.00	4	2.6	2.6	20.5
	22.00	4	2.6	2.6	23.2
	23.00	3	2.0	2.0	25.2
	24.00	4	2.6	2.6	27.8
	25.00	3	2.0	2.0	29.8
	26.00	1	0.7	0.7	30.5
	28.00	4	2.6	2.6	33.1
	29.00	2	1.3	1.3	34.4
30.00	4	2.6	2.6	37.1	
31.00	3	2.0	2.0	39.1	
32.00	4	2.6	2.6	41.7	

33	4	2.6	2.6	44.4
34.00	4	2.6	2.6	47.0
35.00	7	4.6	4.6	51.7
36.00	3	2.0	2.0	53.6
37.00	4	2.6	2.6	56.3
39.00	1	0.7	0.7	57.0
40.00	4	2.6	2.6	59.6
41.00	1	0.7	0.7	60.3
42.00	2	1.3	1.3	61.6
43.00	2	1.3	1.3	62.9
45.00	10	6.6	6.6	69.5
46.00	1	0.7	0.7	70.2
47.00	2	1.3	1.3	71.5
48.00	1	0.7	0.7	72.2
49.00	4	2.6	2.6	74.8
50.00	4	2.6	2.6	77.5
51.00	4	2.6	2.6	80.1
52.00	4	2.6	2.6	82.8
53.00	4	2.6	2.6	85.4
54.00	1	0.7	0.7	86.1
55.00	3	2.0	2.0	88.1
56.00	3	2.0	2.0	90.1
58.00	4	2.6	2.6	92.7
59.00	1	0.7	0.7	93.4
60.00	3	2.0	2.0	95.4
61.00	2	1.3	1.3	96.7
63.00	1	0.7	0.7	97.4
67.00	1	0.7	0.7	98.0
68.00	1	0.7	0.7	98.7
71.00	1	0.7	0.7	99.3
79.00	1	0.7	0.7	100.0
Total	151	100.0	100.0	

What's the exact percentile rank for a hoola 1 score of 23?

Used this info:

Score 1		
N	Valid	151
	Missing	0
Mean	36.6291	
Std. Deviation	15.41325	

Use web-based calculator:

http://davidmlane.com/hyperstat/z_table.html

Answer: 19%

Choose parameters and the area will be computed.

