

Vartanian: Mean, Median, and Mode

Review Questions on mean, median, mode:

Average number of kids during adulthood (total kids in each year of adulthood divided by years as an adult).

#1

1. What is the median number of kids?,
2. What is the modal number of kids?
3. How would we calculate the mean number of kids?

kids	Frequency	Percent	Frequency	Percent
0	1276	32.04	1276	32.04
0.1	75	1.88	1351	33.92
0.2	82	2.06	1433	35.98
0.3	135	3.39	1568	39.37
0.4	121	3.04	1689	42.41
0.5	118	2.96	1807	45.37
0.6	89	2.23	1896	47.60
0.7	100	2.51	1996	50.11
0.8	147	3.69	2143	53.80
0.9	90	2.26	2233	56.06
1	301	7.56	2534	63.62
1.1	88	2.21	2622	65.83
1.2	70	1.76	2692	67.59
1.3	115	2.89	2807	70.47
1.4	107	2.69	2914	73.16
1.5	119	2.99	3033	76.15
1.6	103	2.59	3136	78.73
1.7	95	2.39	3231	81.12
1.8	103	2.59	3334	83.71
1.9	62	1.56	3396	85.26
2	141	3.54	3537	88.80
2.1	38	0.95	3575	89.76
2.2	31	0.78	3606	90.53
2.3	46	1.15	3652	91.69
2.4	32	0.80	3684	92.49
2.5	39	0.98	3723	93.47
2.6	37	0.93	3760	94.40
2.7	29	0.73	3789	95.13
2.8	40	1.00	3829	96.13
2.9	11	0.28	3840	96.41
3	44	1.10	3884	97.51
3.1	11	0.28	3895	97.79
3.2	8	0.20	3903	97.99
3.3	11	0.28	3914	98.27
3.4	7	0.18	3921	98.44
3.5	9	0.23	3930	98.67
3.6	8	0.20	3938	98.87
3.7	9	0.23	3947	99.10
3.8	2	0.05	3949	99.15
3.9	3	0.08	3952	99.22
4	11	0.28	3963	99.50
4.1	2	0.05	3965	99.55
4.2	2	0.05	3967	99.60
4.3	1	0.03	3968	99.62
4.4	2	0.05	3970	99.67
4.5	1	0.03	3971	99.70
4.6	3	0.08	3974	99.77
4.7	1	0.03	3975	99.80
4.8	1	0.03	3976	99.82
5	1	0.03	3977	99.85
5.3	1	0.03	3978	99.87
5.4	2	0.05	3980	99.92
5.5	1	0.03	3981	99.95
6	2	0.05	3983	100.00

5

#2.

1. What is the median number of kids?
2. What is the modal number of kids?
3. What is the mean number of kids?

kids	Frequency	Percent	Cumulative Frequency	Cumulative Percent
0	1704	42.78	1704	42.78
1	1239	31.11	2943	73.89
2	750	18.83	3693	92.72
3	234	5.87	3927	98.59
4	44	1.10	3971	99.70
5	9	0.23	3980	99.92
6	3	0.08	3983	100.00

#3.

The number of marriages

NUMMARR	Frequency	Percent	Frequency	Percent
0	1751	45.37	1751	45.37
1	1837	47.60	3588	92.98
2	232	6.01	3820	98.99
3	32	0.83	3852	99.82
4	4	0.10	3856	99.92
5	2	0.05	3858	99.97
8	1	0.03	3859	100.00

Same questions as #2 for number of marriages.

Answers:

Question 1:

1. The median is .7 kids.
2. The modal number of kids is 0.
3. The mean number of kids is derived by multiplying the number of kids by the frequency for the number of kids in a particular category, then divide by the total sample size. Thus, we would multiply $(0*1276+.1*75+.2*82+...+6*2)/3983$. If we were to calculate this, the mean number of kids is roughly .908. On average, people have .908 kids, or a little bit less than 1 kid per sample member.

Question 2:

1. The median number of kids is 1. This is where we reach 50% of the sample.
2. The modal number of kids is 0 – the most frequently occurring response.
3. The mean number of kids is:

$(0*1704+1*1239+2*750+3*234+4*44+5*9+6*3)/3983 =$ roughly .92 kids. On average, people have .92 kids.

Question 3:

1. Median=1
2. Mode=1
3. Mean= $(0*1751+1*1837+2*232+3*32+4*4+5*2+8*1)/3859 = .6299$ marriages.

