For hypothesis models, see assignment 6.

NUT	mass(g)	length(cm)	width(cm)	Volume(mL)	Density (g/ml)
"Jawbreaker"	142.1	5.7	5.7	103.0	1.7
Choc. malt ball	10.2	2.5	2.3	9.3	1.1
Yogurt-covered almond	5.1	2.7	3.7	3.7	1.4
Choc. espresso bean	2.6	1.8	1.5	1.9	1.4
Jelly bean	1.2	1.5	1.0	0.7	1.7
"Hot Tamale"	1.9	2.4	0.9	1.5	1.3
Yogurt-covered raisin	1.0	1.4	1.1	0.8	1.3

Hypothesis	K	RSS	ln(RSS/n)	AIC	Delta_AIC	exp(-0.5*D)	w
mean	2	402024.2	8.8	532.60	12.40	0.002	0.001
length	3	338759.8	8.6	524.32	4.13	0.127	0.061
volume	3	322102.7	8.6	521.30	1.10	0.577	0.276
mass	3	316244.5	8.6	520.20	0.00	1.000	0.479
density (=mass/volume)	3	389949.1	8.8	532.77	12.57	0.002	0.001
fusiformity (=length/width)	3	396501.2	8.8	533.77	13.57	0.001	0.001
length + mass	4	315975.1	8.6	522.14	1.95	0.377	0.181
	N =	60				2.086	1.000

Equations:

$$AIC = n \times \ln(RSS/n) + 2K$$ (assumes normal distribution of residuals)

$$\mathrm{AIC_c} = n \times \ln(RSS/n) + 2K + \frac{2K(K+1)}{n-K-1}$$ (use $\mathrm{AIC_c}$ when $n/K < 40$)

$$\Delta AIC_i = AIC_i - \min(AIC)$$

$$w_i = \frac{\exp\left(-\frac{1}{2}\Delta_i\right)}{\sum_{r-1}^{R}\exp\left(-\frac{1}{2}\Delta_r\right)}$$