## Application 14

## Sugar in Cereals

## Percentage of Sugar in Cereals Product % Sugar Product % Sugar 29.0 Sugar Smacks (K) 56.0 Kellogg Raisin Bran (A) C. W. Post, Raisin, (A) 54.6 29.0 Apple Jacks (K) C. W. Post (A) 28.7 Froot Loops (K) 48.0 Frosted Mini Wheats (K) General Foods Raisin Bran (A) 26.0 48.0 Sugar Corn Pops (K) Country Crisp (K) 22.0 46.0 Super Sugar Crisp (K) 46.0 Life, cinnamon (K) 21.0 Crazy Cow, chocolate (K) 45.6 100% Bran (A) 21.0 All Bran (A) 45.5 19.0 Corny Snaps (K) Frosted Rice Krinkles (K) 44.0 Fortified Oat Flakes (A) 18.5 Life (A) 16.0 Frankenberry (K) 43.7 43.5 Team (A) 14.1 Cookie Crisp, vanilla (K) Cap'n Crunch, crunch berries (K) 43.3 40% Bran (A) 13.0 Cocoa Krispies (K) 43.0 Grape Nuts Flakes (A) 13.3 42.6 Buckwheat (A) Cocoa Pebbles (K) 12.2 Product 19 (A) 9.9 Fruity Pebbles (K) 42.5 Concentrate (A) 9.3 Lucky Charms (K) 42.2 Cookie Crisp, chocolate (K) 41.0 Total (A) 8.3 Sugar Frosted Flakes of Corn (K) 41.0 Wheaties (A) 8.2 40.7 Rice Krispies (K) 7.8 40.1 Grape Nuts (A) 7.0 Crazy Cow, strawberry (K) Special K (A) Cookie Crisp, oatmeal (K) 40.1 5.4 Cap'n Crunch (K) 40.0 Corn Flakes (A) 5.3 5.0 Count Chocula (K) 39.5 Post Toasties (A) Alpha Bits (K) 38.0 Kix (K) 4.8 Honey Comb (K) 37.2 Rice Chex (A) 4.4 4.0 Corn Chex (A) Frosted Rice (K) 37.0 Wheat Chex (A) Trix (K) 35.9 3.5 Cocoa Puffs (K) 33.3 Cheerios (K) 3.0 Shredded Wheat (A) 0.6 Cap'n Crunch, peanut butter (K) 32.2 Golden Grahams (A) 30.0 Puffed Wheat (A) 0.5 Cracklin' Bran (A) 29.0 Puffed Rice (A) 0.1

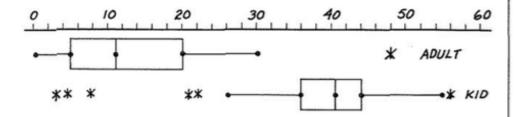
Source: United States Department of Agriculture, 1979.

We divided the list into "kid" and "adult" cereals as indicated by a (K) or an (A) following each name. (You may disagree and change some of these.)

What do you think the table means when it says that "the percentage of sugar" in Sugar Smacks is 56.0?

## SECTION IV: BOX PLOTS

The following box plots show the amount of sugar in "kid" and "adult" cereals.



- 2. For the "kid" cereals, estimate:
  - a. the lower extreme
  - b. the upper extreme
  - c. the median
  - d. the lower quartile
  - e. the upper quartile
- 3. For the "adult" cereals, estimate
  - a. the lower extreme
  - b. the upper extreme
  - c. the median
  - d. the lower quartile
  - e. the upper quartile
- Write a paragraph comparing the percentage of sugar in "kid" and "adult" cereals.

- It could mean either percentage of weight or percentage of calories.
- 2. The actual values are as follows:
  - a. 3.0
  - b. 56.0
  - c. 40.85
  - d. 35.9
  - e. 43.7
- 3. The actual values are as follows:
  - a. 0.1
  - b. 48.0
  - c. 11.05
  - d. 5.15
  - e. 20.0
- 4. Answers will vary. Sample: These box plots show that there is a lot more sugar in "kid" cereal than in "adult" cereal. In fact, all but one of the "adult" cereals are 30 percent or less sugar while more than 75 percent of the "kid" cereals have more than this percentage of sugar. However, there are five outlier "kid" cereals that have far less sugar than the others. The three lowest—Cheerios, Kix, and Rice Krispies—even have a low amount of sugar relative to most "adult" cereals. The other two—Cinnamon Life and Country Crisp—are high relative to the "adult" cereals, but still quite low relative to the other "kid" cereals.

One "adult" cereal, Raisin Bran, has more sugar than most of the "kid" cereals.