How to Perform Data Calculations

There are numerous computations that KIDS COUNT uses that involve rates, percents, and percent change over time. Many of these calculations are similar. The computation used depends on what we want to say about the data. Basically, each of these calculations involves dividing one piece of data by another.

Percent

A 'percent' means one part in one hundred. Ten percent means 10 out of 100. To calculate a percent, divide the number in a sub-group (or smaller number) by the number in the total group and multiply by 100.

Example: **Percent: (number in subgroup / number in whole group)**
(Number of children born in South Dakota, 2007 [12,248] / number of low birth weight babies born in South Dakota) [853] x 100.

853 / 12,248 = 0.0696 x 100 = 6.9%

Almost 7 percent of the total babies born in South Dakota in 2007 were born low birth weight (less than 5.5 pounds).

Rate

A rate is simply the number of things per some other number, usually 100, 1,000 or other multiples of 10. A percentage is a rate-per 100. Depending on the size of the subgroup, a rate greater than 100 is often used. This is the case in health statistics such as infant mortality, child death, etc.

To calculate a rate you need three pieces of information- (1) the total group number, (2) The number in the sub group and (3) the 'per' number--per 1,000, 10,000, or 100,000. The "per" number is your multiplier.

Example: **Rate: (number in sub-group / number in whole group) x multiplier**

(number of child deaths in the state [41] / number of children ages 1-14 in the state [154,779]) x multiplier

(41 / 154,779) = 0.0002648 x 100,000 = 26.48

Thus the child death rate for South Dakota, in 2007, was 26.5 per 100,000 children ages 1-14.

Rates can also be obtained per month or per day.

12,248 infant births in 2007 in South Dakota

➢12,248 infant births / 12 months = 1,021 infant births per month in South Dakota
➢12,248 infant births / 365 days = 34 infant births per day in South Dakota

Percent Change

Change from one time period to the next can be calculated. This is called the 'percent change'. The percent change is found in the demographic section of the Factbook and in the health section-age appropriate immunizations.

The percent change is calculated in the following manner:
(newer year number - older year number) / older year number x 100

2007 estimate population under age 20 in South Dakota = 219,891 (newer number)
2000 population under age 20 in South Dakota = 234,385 (older number)

(219,891 - 234,385) = - 14,494
-14,494 / 234,385 = -.0061 x 100 = -6.1%

This figure indicates that between 2000 and the 2007 estimates for the number of children under age 20 *decreased* by 6%.