

## Common Formulas

### Take a Percentage of Something

Formula: (small number / large number) x 100

Example:  $5/10=.5$       $.5 \times 100=50\%$

### Percentage Point Increase/Decrease

Formula: (New Pass Rate – Old Pass Rate)

Example: Fall 2008 % = 73.7%  
Fall 2004 % = 68.2%

$(73.7-68.2) = 5.5$  percentage point increase

### Rate of Change

General Formula (New Enrollment- Old Enrollment) / (Old Enrollment) x 100

Example: Change in program enrollment

Enrollment in 2004: 255  
Enrollment in 2008: 204  
Rate of Change =  $(204 - 255) / 255 \times 100 = -20\%$

This formula is further classified as gross (or raw) change and net change

A “gross” percent increase/decrease is determined by using raw numbers in the formula such as the example above.

A “net” percent increase/decrease is determined by using the percentage of the population the subgroup makes up. This method is used to adjust for overall population increases/decreases

College-wide withdrawal rate in Fall 2007 = 17.1% of all grades  
College-wide withdrawal rate in Fall 2008 = 15.3% of all grades  
Rate of Change =  $(15.3\% - 17.1\%) / (17.1\%) \times 100 = -10.5\%$  decrease in the proportion of withdrawal grades out of all grades

*Adapted from Local Demographic Analysis Workshop workbook, Smartgirl Technologies, Inc. 2002*