



$38\%$  MATH 1030 #5c  $17/100$

Use and Abuse of Percentages

Use and Abuse

$142\%$

$33\frac{1}{3}\%$

## Percentage Points vs Percent

Absolute Change is expressed in percentage points.

Relative change is recorded as a percent.

EX 1: The percentage of Republicans in the House of Representatives decreased from 53.3% in 2007 to 46.4% in 2009. Describe this change with percentage points and with a percent.

EX 2: Given 30% of city employees in Carson City ride the bus to work, explain why the following statements are different.

The percentage of city employees who ride the bus is 10% higher in Freetown than in Carson City.

The percentage of city employees who ride the bus is 10 percentage points higher in Freetown than in Carson City.

EX 3: Your dinner bill is \$42.50. You leave \$50.00. What percent was your tip?

EX 4: The number of housing foreclosures in 2009 was 3.98 million, up 81% over 2007. How many foreclosures were there in 2007?

EX 5: Determine if these statements are valid. If not, fix them in some way, if possible.

A politician promises, "If elected, I will cut your taxes by 10% for each of the first three years of my term, for a total cut of 30%."

Replace your standard light bulbs with these new ones that use 175% less energy.

Your midterm score was 82% and your final score was 96%, so you answered 89% of the questions on these exams correctly.