

<b>HOW TO FIGURE A RELATIVE RISK:</b>	<p>Step 1: Figure the percentage of people “at risk” by group. For instance, this could be the denial rate for blacks versus whites.</p> <p>Step 2: Divide the two numbers. The numerator ought to be the group you focus on in your reporting. In this case, it’s black applicants.</p> <p>Step 3: Decide how to express it. Your choices are as a ratio (“as likely”) or as a percent difference (“more likely”). Make any calculations you need to match your words and numbers.</p>
<b>FORMULA:</b>	<p>Step 1: (number affected / total in group 1), (number affected / total in group 2)</p> <p>Step 2: Divide the two (Answer group 1 / Answer Group 2)</p> <p>Step 3: Convert to a percentage if it’s less than 2, express as a ratio if it’s more than 2.</p> <p>If you convert it to a percentage difference, express as “percent more (or less) likely than”: <math>(\text{relative risk}-1) \times 100</math>.</p>

**EXAMPLE:**

In Nashville, 40 of 120 upper-income black home loan applicants were denied mortgages; 300 of 2,400 whites in the same income bracket were denied loans.

Step 1: Figure the denial rates:

Blacks =  $40 / 120 = .33333$ , or 33.3 percent, or one-third.

Whites =  $300 / 2,400 = .125$  or 12.5 percent, or one-eighth.

Step 2: Figure out the relative risk:

$$.333 / .125 = 2.664$$

In words, this says, "Upper income blacks are denied for mortgages 2 1/2 times the rate of whites."

Step 3: Change how it's expressed to allow for the words "more likely" by calculating a percent change without multiplying by 100. (See "Measuring change" for more on percent changes.):

$$(33.3 - 12.5) / 12.5 = 1.664$$

In words this says, "Blacks are 1.7 times more likely than whites to be denied for loans."