



# PENSION TRENDS

BY INDEPENDENT ACTUARIES, INC.

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Volume XVIII, Issue II

June 2017

## Not So Funny Math

*Here are some math concepts we want to share with you and your clients. We wish these were intended to be lighthearted, but they are not. Each is relevant to successful planning for retirement.*

### Question: When does 50% equal 100%?

Answer: When your IRA or your 401(k) account goes down by 50%. If it does, you have to earn 100% just to get back to square one. For example, if you had accumulated an account balance of \$180,000 and lost 50%, you would be left with \$90,000. To get back to your original account balance of \$180,000 you would need to earn \$90,000 which is equal to 100% of your current balance. The good news is that if you "only" lost 30% of your account balance in a stock market slide, you would "only" need to earn back 43% in order to recover your losses. The moral of this story? When saving for retirement, a conservative, diversified portfolio increases the chance you will hold onto your retirement dreams.

### Question: When does 79.2 equal 84.5?

Answer: When you factor in improvements in longevity. Life expectancy for a typical American male age 65 today is something on the order of 19.4 years. Back in 1951 when analysis was done to develop the 51 Group Annuity Mortality Table, a 65-year old American male had a life expectancy of only 14.2 years. That translates to almost a 37% longer retired lifetime (assuming an age 65 retirement). For females the change is somewhat less dramatic, from 17.1 years to 21.2 years, a 24% improvement. The related question, for which there is no reliable answer, is whether we will continue to experience increasing longevity improvements. Of course, no one knows with certainty and opinions among experts differ.

Perhaps more important to you and me is: what does an average life expectancy mean to us individually? The answer is not much. The chance that our typical 65-year old male will die at age 83 is less than 10%. In other words, the odds are he will live to an age other than his life expectancy! That is why it is so difficult for someone to look at his or her 401(k) account and feel comfortable that it will last a lifetime. What is a lifetime?

### Question: 0 divided by 0 equals -- what?

Answer: Any mathematician worth his or her salt will tell you 0 divided by 0 is indeterminate. While this result is of interest to only a few of us egghead mathematicians, the federal government has developed its own definition. For purposes of determining whether a defined benefit plan is adequately funded, IRS decided 0 divided by 0 equals one. That is, a plan with no assets and no liabilities was considered to have a 100% funding ratio. Put another way, a plan with no assets and no liabilities was not considered to be underfunded, an altogether logical result.

### Question: When does 8 equal #1?

Answer: When you are counting enrolled actuaries. In the Pacific Northwest, only one locally owned pension consulting firm has eight enrolled actuaries to serve its clients. At IAI, we are proud of our unique position in the actuarial arena - an employee-owned firm with national actuarial power and expertise, and local market fees and service commitment.

***We look forward to serving you and your clients for years to come.***

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