

Money Matters Wrap-up

After completing this section, students should be able to:

- Use loan calculations to decide if it is better to take a lump sum or annual payments for a signing bonus or lottery payment.
- Use spreadsheets to compare retirement options and loan options.

Tim and Tom

Tim and Tom are twins. At age 20, they both went to work with identical salaries of \$50,000 and each got an annual raise of 3% each year. Each of them have savings accounts that earn 5% annual interest, compounded annually.

However, Tim and Tom were not identical in all respects. Starting at age 20, Tim put aside 10% of his salary for retirement, while Tom spent his entire salary. At age 40, Tim decided to start spending his salary every year, while Tom started putting aside 10% of his salary every year.

At age 65, Tim and Tom compared their retirement savings.

Question. How many years did each twin put aside savings?

Question. How much money did each twin put aside total for retirement out of their salaries over the years?

Question. Who had more retirement savings at age 65?

Baseball Contracts

According to a CNN article from July 1, 2019,

- baseball player Bobby Bonilla is still getting paid \$1.2 million a year from the NY Mets even though he hasn't played for them since 1999. (more specifically, \$1,193,248.20 a year).
- These payments started in 2011 and will continue through 2035.
- In 1999, they only owed him almost 6 million, and wanted to get rid of him, and instead of paying him outright, negotiated this deal, based on an 8% interest rate.

1. The article says that Bonilla will get paid a total of \$29.8 million. Where does this number come from?

2. How can "almost 6 million" translate into this big a figure? Work out the numerical details including *exactly* how much the "almost 6 million" must be.

Hint 1: you can think of the almost 6 million earning compound interest for 10 years from 2001 until 2010.

Hint 2: starting in 2011, through 2035 you can think of the 1.2 million a year as loan payments – it is like, instead of the NY mets paying what they owed in full in 2011, they asked Bobby Bonilla to loan that amount to them as a 25 year loan that they would pay back in annual installments.

3. Would you rather have gotten the almost 6 million in 1999 or the 1.2 million a year from 2011