

## **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