

Comparing Loan Options

A high school senior (Jeremy) is comparing the financial aid packages from three different schools he is considering attending. Below are the loan options from each school:

School A: \$12,000 in loans per year with a 3.2% interest rate

School B: \$10,000 in loans per year with a 5% interest rate

School C: \$6,000 in loans per year with an 11% interest rate

Note that all of these loans are *deferred*, meaning that **they do not start accumulating interest until after you graduate.**

1.) Assuming that Jeremy finishes school in 4 years, how much would he owe at each school in total? (The average student loan debt for college graduate in 2017 was \$39,400)

2.) Without doing any calculations, which school do you think Jeremy should attend? Explain why.

3.) Assuming Jeremy graduates in 4 years, how much would he owe on each loan after 1 year (remember interest starts accumulating after graduation)? Show your work

4.) Write a function for the total owed after t years for each loan.

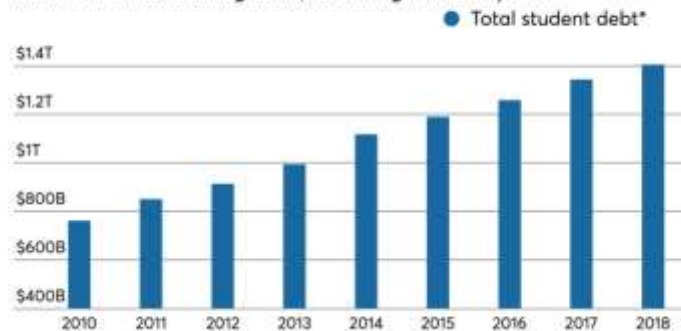
5.) Explain what each part of each equation represents (each number and variable).

6.) The typical repayment term on a student loan is 10 years. How much would Jeremy pay in total for each loan after 10 years?

7.) Assuming the schools are equal, which one should Jeremy pick? Explain why.

The price of education

Student debt has climbed nearly 85% in the past eight years, to \$1.4 trillion, as college costs have soared. The federal government holds more than 90% of outstanding loans, according to industry data



Source: Federal Reserve Bank of New York (*June 30 data)