

8.12 (G)

estimate the cost of a two-year and four-year college education, including family contribution, and devise a periodic savings plan for accumulating the money needed to contribute to the total cost of attendance for at least the first year of college

INTERVENE

<1 min

Calculator Cheat Sheet (Zoom In)

To type the variable "x" Ex: $3x + 2$	<ol style="list-style-type: none"> 1. Type the 3 2. Press X, T, θ button 3. Type + and then 2
To display a table for $y = 3x + 2$	<ol style="list-style-type: none"> 1. Go to $y =$ (at the top left) 2. Enter $3x + 2$ into $y_1 =$ 3. Press 2nd Graph
To display a graph for $y = 3x + 2$	<ol style="list-style-type: none"> 1. Go to $y =$ (at the top left) 2. Enter your equation into y_1 3. Press graph
Adjust your window	<ol style="list-style-type: none"> 1. Press window 2. change xmin, xmax, ymin, ymax 3. Press graph again
To return to home screen if you are in the graphing or table mode	2 nd Mode
To delete something you typed in error	Use right or left arrow to highlight what you want to delete and then press delete
To insert something you forgot	Highlight where the item should go and press 2 nd Delete (insert)
Entering a set of data	<ol style="list-style-type: none"> 1. Press Stat then press Enter 2. Put x-values in L_1 3. Put y-values in L_2
Ordering a set of data in a List	<ol style="list-style-type: none"> 1. 2nd Stat 2. Move cursor to OPS 3. Press 1 for ascending or Press 2 for descending 4. 2nd (Choose the list you want to sort by pressing 1-6) 5. Press 2nd and the list you sorted 6. Enter
Creating a scatter plot for data	<ol style="list-style-type: none"> 1. Follow steps above to enter the data 2. Go to $y =$ and up arrow to highlight plot 1 3. Press enter and down arrow 4. Zoom 9 and your points should appear
Write an equation for a set of data that you know is linear. (Linear Regression)	<ol style="list-style-type: none"> 1. Follow steps above to enter data 2. Press Stat, Right Arrow to calculate, press 4, Enter

Calculator Cheat Sheet

Operation	Button
Reset Memory	2 nd +, 7, 1, 2
Turn Off	2 nd On
Darken Screen	2 nd Up arrow
Lighten Screen	2 nd Down Arrow
Open Parentheses	Above the 8
Closed Parentheses	Above the 9
To clear the home screen	Clear
To enter a negative number like -5	Press (-) (at bottom right next to decimal point) and then the number
Square a number Try squaring 5 and -5 Be sure to put -5 in ()	<ol style="list-style-type: none"> 1. Press 5 2. Press x^2 1. Press (-5) 2. Press x^2
Take the square root of a number $\sqrt{484}$	<ol style="list-style-type: none"> 1. Type 2nd x^2, a square root symbol will pop up on your screen, 2. Type in the number you want to take the square root of and close the () 3. Press Enter
Raise a number to a power: 4^3	<ol style="list-style-type: none"> 1. Type 4 2. Type ^ (right below clear) 3. Type the power
To enter a fraction like $\frac{5}{9}$	<p>Path 1</p> <ol style="list-style-type: none"> 1. Open Parentheses 2. 5 3. \div 4. 9 5. Close Parentheses 6. Enter <p>Path 2 (New Operating System)</p> <ol style="list-style-type: none"> 1. Alpha y= 2. Choose between 1,2, or 3 3. Then place the number in the correct place
To turn a decimal into a fraction	Math, Enter, Enter
To use π	Second ^
To recall the last thing you typed so you can edit it	2 nd Enter

Fluency Practice

- How many months are in a year?
- What is $9,000 \div 12$?
- What is $8,254 - 875$?

2 min

Problem Solving Strategies

- **1. Understand the Problem**
 - Read the problem carefully (at least 2 to 3 times)
 - Highlight important information (what do I know)
 - Identify Math Clue words (words that tell you what math operations you need to use)
 - Underline what you need to find
- **2. Plan of Action (how you will solve this problem in steps)**
 - First I will
 - Then I will
 - Next I will
 - Finally, I will
- **3. Show your work in steps (solve using your steps)**
- **4. Check your answer (does my answer make sense? why)** <3 min

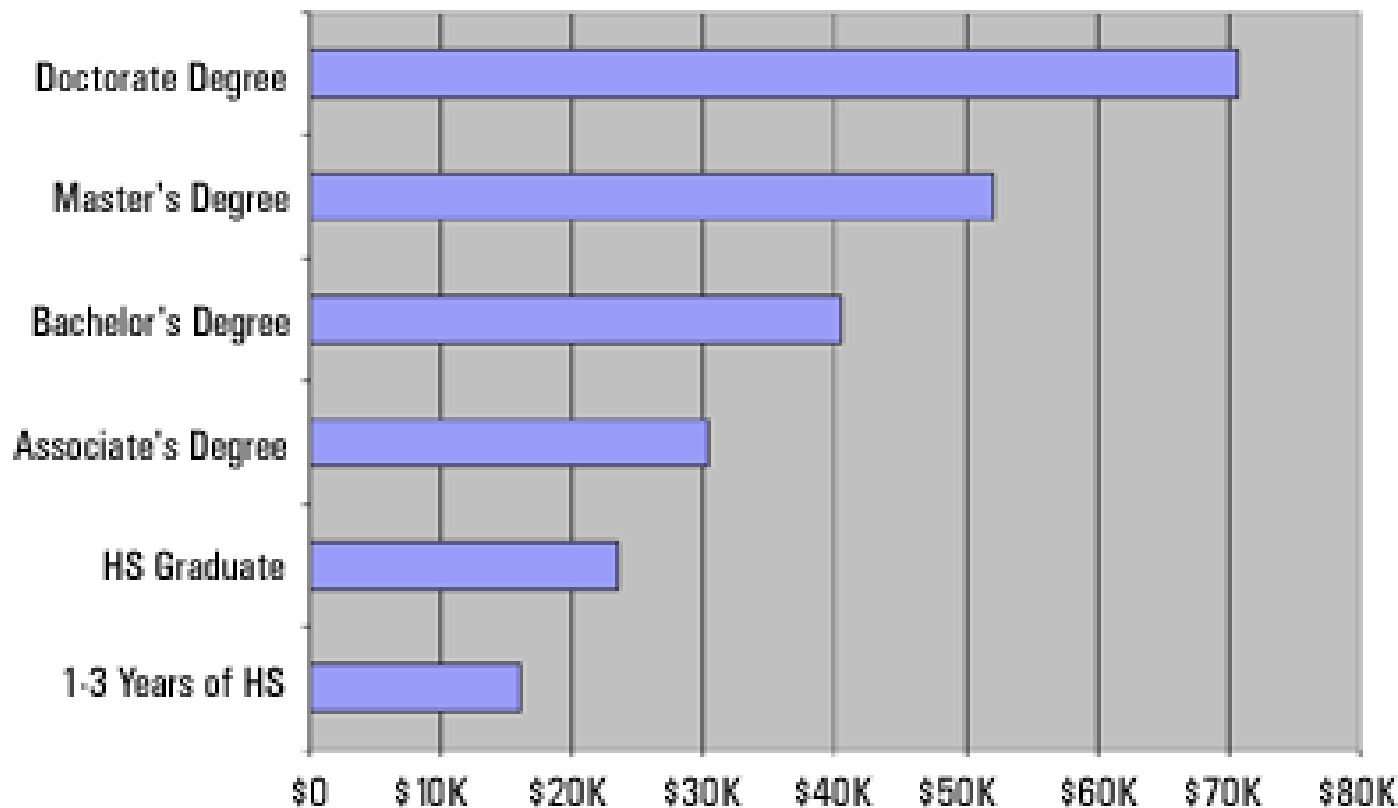
College can be expensive

- This lesson is written to help you plan for college.
- College is **not** cheap, but investing in your education can help you make more money in the long run.
- According to the College Board, the average **annual (just one year)** cost of tuition and fees at a public university for the 2014-15 school year was \$9,139 for an in-state student and \$22,598 for out-of-state students. The average cost of a private university was much higher at \$31,231 for the same period.
- This amount doesn't include living expenses

1 min

Average salaries at different education levels

But throughout your entire career, you will likely make a lot more money with a college degree than without.



How to Save for College

- Put money into an account every month from now until you start college. Save gifts and family contributions.
- Let's say you put 400 dollars per month into a savings account for college.
- You save for 4 years. 4 years is the same as 48 months.
- $400 \times 48 = \$19,200$ total savings for college.
- This would pay for about 2 years of college tuition and fees!

I do

An eighth-grade student estimated that she needs \$8,800 for tuition and fees for each year of college. She already has \$5,000 in a savings account. The table shows the projected future value of the account in five years based on different monthly deposits.

Future Value of a Savings Account

Initial Balance (dollars)	\$5,000	\$5,000	\$5,000	\$5,000
Monthly Deposit (dollars)	\$100	\$200	\$300	\$400
Account Value in Five Years (dollars)	\$12,273	\$18,737	\$25,202	\$31,667

The student wants to have enough money saved in five years to pay the tuition and fees for her first two years of college. Based on the table, what is the minimum amount she should deposit in the savings account every month?

- A \$200
- B \$300
- C \$100
- D \$400

<5 min

We do - Question 1

Alejandra and her family are discussing how to pay for her college education. The cost of tuition at the college that Alejandra wants to attend is \$9,000 per year. Alejandra's parents will pay 85% of the tuition cost every year, and she will pay the rest. Alejandra has one year to save enough money to attend her first year of college. What is the minimum amount of money she should save every month in order to reach her goal?

- F** \$637.50
- G** \$1,350.00
- H** \$112.50
- J** \$28.12

<5 min

We Do – Question 2

Tuition for one year at a state university is about \$13,000. Devon would like to attend this university and will save money each month for the next 4 years. His parents will give him \$5,200 for his first year of tuition. Which plan shows the minimum amount of money Devon must save to have enough money to pay for his first year of tuition?

- A** Save \$108.33 per month for the next 4 years
- B** Save \$162.50 per month for the next 4 years
- C** Save \$650.00 per month for the next 4 years
- D** Save \$270.83 per month for the next 4 years

<5 min

You Do

- Go back to Intervene to take your quiz!

Answer Key

- I Do – A
- We Do 1 – H
- We Do 2 – B