

Interview Q&A - 1st year HR student

What do you use a calculator for?

- Almost exclusively for her accounting and finance classes
- Most of her usage of the calculator is for simple lightweight math used in accounting and finance.
- She does not use it extensively, mostly for exams and homework.

What would you like your calculator to do? Or what is the ideal calculator for you?

- She likes her calculator to be simple
- Prefers a calculator that has its function symbols identical to the ones in the books
- She would like her calculator to display the answers in a human readable form (5x7 Matrix numeric representation), and not the digital form (7-segment numeric representation)
- In the future she would like to see a calculator network system, similar to that of the iclicker, where the professor would give you a password, which after inputting it into the calculator, downloads a custom function from the professor's base station, or unlocks/locks some of the pre programmed functions in the calculator.

What kinds of calculators have you used? (physical, apps, online, etc.). Hardware or Software?

- Uses both a physical calculator as well as a calculator app on her phone.
- Mainly uses the calculator application because it's always available.
- Prefers the physical calculator since she enjoys the tactile feel of the buttons and because phones are not allowed during exam time.

What functions do you use most often? Which ones do you use the least?

- Most of the time she uses functions such as: addition, subtraction, delete (backspace) , 10^x , Ans function for retrieving the previous answer , exponential and square root.
- Rarely, if ever, uses logarithms or any of the trigonometric functions.

What features did you like most about your calculator. What do you not like about your calculator?

- She feels indifferent about what she likes in her calculator. All she cares about is that the calculator gives the right answer.
- The only thing she does not like about her calculator is that it displays numbers in a digital format (7 segment numeric representation)

Are the aesthetics of your calculator important? What matters most (shape, color, personalized themes, etc.)?

- Most of the physical aesthetics are of little importance to her. What matters the most is that the calculator gives an answer.
- She claims that the physical aesthetics would be merely a perk and would not pay extra for them.

If you're using a keyboard, how would you map the keys to functions, numbers, etc. ergonomics?

- She would like her calculator to have some shortcuts to common functions such as percentage
- Prefers the shortcuts to have their own dedicated buttons on the calculator instead of having to press multiple buttons at once.

Thoughts on making a calculator that has customizable capabilities?

- She would like to have the ability to program functions into the calculator, but only if academic establishments would allow it.

Interview Q&A

What do you use a calculator for?

- University studies
- Mostly finds himself using it for mathematical purposes.

What would you like your calculator to do? Or what is the ideal calculator for you?

- His ideal calculator would not be missing essential functions like plus, minus, multiplication, exponents, and the basics. Other common functions he mentioned from University, include logs, derivatives, e, integrals, roots, square roots, and more. He believes it's a must to have the ANS (answer button), and calculation history included too.
- The calculator should be lightweight and portable.
- In the future he would like to see more calculators that provide more support for polar coordinates. Lastly he would like to have access to shorter readable manuals or video content to quickly go over all of the calculator's features and how to implement them.
- Believes It would be great to have the answer button, calculation history, polar capability and a shorter readable manual!

What kinds of calculators have you used? (physical, apps, online, etc.). Hardware or Software?

- Both softwares and physical.
- Prefers physical calculator more than software-based because he has become used to it since his High School years.
- He doesn't mind using software calculators as long as it has useful shortcuts. He defined a simple software calculator as something that can open and run quickly on a computer or any other device.
- Kevin also mentioned he uses software calculators mostly for basic problems but not derivations and more advanced operations because it becomes too tedious to work with. He would much rather use the physical one.

What functions do you use most often? Which ones do you use the least?

- Addition, subtraction, multiplication, division, exponents, roots, converting to fractions, sin, cos, tan, exponents, logs, and mod.

What features did you like most about your calculator. What do you not like about your calculator?

- He liked Hexadecimal conversion, octa, binary conversions, derivations, and integration functions because they're relevant to his engineering courses.

- Kevin doesn't like using the mouse pointer on his computer to input the values and functions on his software-based calculator. He would much rather use the computer keyboard. He mentioned the clicking option should be removed completely to encourage others to use the keyboard.

Are the aesthetics of your calculator important? What matters most (shape, color, personalized themes, etc.)?

- Easy to fit in your palm, portable, not too colourful (greyish, black). It should also be key mappable if it is a software-based calculator.

If you're using a keyboard, how would you map the keys to functions, numbers, etc. ergonomics?

- He would use the numbered keypad for inputting numbers
- Any symbols that are already commonly found (+,-;etc.) on both computers and physical calculators should be included.
- Assign important features and functions to large buttons, like the space bar or return key.
- Include a shortcut to quit
- Use the first letter of functions to input them into calculator. Ex: C for cos, S for sin, T for Tan, etc.

Thoughts on making a calculator that has customizable capabilities?

- Doesn't think it is necessary. He usually uses google to help solve complex problems and inputs the simple calculations on the calculator to double check his work and find the final answer.
- He believes it would be great to include physical skins to personalize the calculator but it is not a must.
- In the future he would like to make it customizable by being able to download packages for calculator functions that can easily be added or removed to the device.

Interview Q&A - 3rd year electrical engineering student

What do you use a calculator for?

- Any mathematics courses in his degree
- Almost all Engineering courses.
- Counting money at his job

What would you like your calculator to do? Or what is the ideal calculator for you?

- It should have the basic, essential functions such as square root, exponential, logarithms, and trigonometric functions.
- His ideal calculator would also have the ability to find variable unknowns (system of equations)
- He believes that a calculator that can plot and display graphs would be very beneficial
- Another feature he would like to see in calculators is the ability to calculate indefinite integrals.
- One of the main features he really wants to see is the ability to save/transfer his work (Graphs, functions, answers) from his calculator to his mobile phone.

What kinds of calculators have you used? (physical, apps, online, etc.). Hardware or Software?

- He has used all kinds of calculators, physical ones, apps, software...
- Prefers a physical calculator since he's used to its layout and buttons
- For quick calculations, he uses any calculator closest to him.

What functions do you use most often? Which ones do you use the least?

- Frequently uses functions such as trigonometric functions, exponential, logarithms, and root
- Hardly ever uses the modulus or absolute value functions.

What features did you like most about your calculator. What do you not like about your calculator?

- He dislikes that his calculator does not support finding unknown variables in equations.
- Claims that the few functions his calculator has for Radians and polar equations have been very helpful.

Are the aesthetics of your calculator important? What matters most (shape, color, personalized themes, etc.)?

- Aesthetics of his calculator are important to him.
- He prefers his calculator to be comfortable to hold
- Personalized themes on his calculator have little importance to him
- Prefers to buy a nice looking calculator that he likes and sticking with it instead of buying a customizable one.

If you're using a keyboard, how would you map the keys to functions, numbers, etc. ergonomics?

- He has no preference for key mapping, instead he would like his calculator to be set up in a way such that when he types the first few letters of the function name, it would show him function suggestions of which he can chose one.

Thoughts on making a calculator that has customizable capabilities?

- Would only buy it if it comes at no extra cost, otherwise he would prefer to buy a cheaper calculator with the pre-programmed functions that he knows he needs.

Interview Q&A - 2nd year avionics student

What do you use a calculator for?

- He uses it to solve his math and physics problems most of the times.
- He also uses it to keep track of his finances and plan his spending accordingly.

What would you like your calculator to do? Or what is the ideal calculator for you?

- In addition to basic functions he would like it to be able to calculate more complex functions such as e^x , log, roots, derivatives, integrals and so on.
- His ideal calculator is the one that has specific button for each function while it is portable.
- Maybe a folding calculator.

What kinds of calculators have you used? (physical, apps, online, etc.). Hardware or Software?

- He has used both hardware and software.
- He prefers using his engineering calculator app on his cellphone but since he is not allowed to use it in the exams he has to use his regular calculator most of the times.

What functions do you use most often? Which ones do you use the least?

- These days in addition to basic functions like multiplication and division, he mostly uses functions such as power, exp, root, log, trigonometric, derivative and integral.
- The factorial function might be one of those that he used the least recently.

What features did you like most about your calculator. What do you not like about your calculator?

- Since it is a pretty simple calculator, it is simple to use for the fundamental functions.
- The things that he doesn't like about it is that it cannot convert decimals into fraction and also it can't calculate derivative and integral.

Are the aesthetics of your calculator important? What matters most (shape, color, personalized themes, etc.)?

- He doesn't care about the aesthetic of calculator.
- Its simplicity of use, accuracy and portability have higher importance to him.

If you're using a keyboard, how would you map the keys to functions, numbers, etc. ergonomics?

- He would assign each function to a specific button.
- For inverse functions such as arcsin or nth root he would assign shift + the key for original function.
- He would make sure that his calculator has the ability to represent numbers in different formats. For instance, he would assign the key "H" for Hexadecimal and "R" for radian.

Interview Q&A - Entrepreneur

What do you use a calculator for?

- She mostly uses it to calculate the price of services and products for the clients.
- Calculate her employees' salary based on the hours they work.
- She also uses it to keep track of her personal finances.

What would you like your calculator to do? Or what is the ideal calculator for you?

- Since most of the times she uses it to calculate the amount of money, she prefers her calculator to round the amount to 2 decimals.
- She would also like to have a button to calculate the tax so it would save her time and prevent making mistakes.

What kinds of calculators have you used? (physical, apps, online, etc.). Hardware or Software?

- She generally uses a physical calculator because she is used to it.
- When she does not have her calculator with her, she uses apps and/or online calculators.

What functions do you use most often? Which ones do you use the least?

- Most often she uses multiplication, addition, subtraction, division and percentage.
- She rarely uses other functions such as sin, cos or log.

What features did you like most about your calculator. What do you not like about your calculator?

- She likes that its screen is large in size and that it has soft buttons.
- Its simplicity to work with.
- Since it is rather large, it is not very portable. She can only use it in her work place.

Are the aesthetics of your calculator important? What matters most (shape, color, personalized themes, etc.)?

- Not that much. As long as it has a decent look and is easy to work with, it would be OK.

If you're using a keyboard, how would you map the keys to functions, numbers, etc. ergonomics?

- She would map the numbers and basic functions to their associated keys in keyboard.
- She would also like to have some shortcut keys for instance “t” for calculating tax and “s” for total sum.
- She believes it would be interesting to have a calculator that can be customized by the user. For example since the tax rates, products price and employees’ salaries are subject to change, it would be cool if it had a shortcut for each of them to be able to modify the amount when the change happens.