# Quant Self-diagnostic Quiz
# Solutions & Scoring Guidelines

## Overview

Below are the answers and solution methods for the ***FastMath Ace the Case*** **Quant Self-diagnostic Quiz** problems and scoring guidelines. A major focus of the ***FastMath Ace the Case*** Online Course is to teach ***fast*** and ***efficient*** and methods for performing calculations. Therefore, full scores on the **Self-diagnostic Quiz** are only given for the **most efficient** solution, and even if you have calculated the correct answer you may not receive full credit. My experience working with many students (often from top universities) is that the majority of people do not use the most efficient solution methods for these problems. In fact, I designed these questions specifically to identify where you can improve your calculation efficiency and for the questions to be representative of real Case Interview quant questions. I use the term **"Typical Solution Method"** for the methods that the **majority** of people use to solve these problems, which are **not** the most efficient methods. Again, this is how the the majority of people solve these problems, so don't feel bad if you didn't use the most efficient methods. There is a section on interpreting your score at the end of the document. The last last page of this document is a scoring sheet, which you can print and use to record your score.

This tool uses very "stringent" scoring guidelines, and the results will only be meaningful if you adhere to these guidelines. Do not be discouraged if you get a "low" score, as these questions are very challenging, and these questions are very different from a typical academic test in that they were designed to test your limits, rather than to assess knowledge of a specified set of material. Taking this Quant Self-diagnostic Quiz will highlight areas for improvement prior to your interviews.

I don't necessarily believe that there is a single "correct" method to solve particular problems, but I do believe that some solution methods are much simpler and more efficient than other methods. The scoring guidelines describe both inefficient, and my suggested efficient solution methods. If you found another method for solving a problem which is comparable in efficiency and simplicity to the recommended solutions then feel free to give yourself full credit.

## Difficult Test

This is a difficult test, and it is very challenging to receive to score above even 70% using the scoring guidelines. The average scores on this test will be well below what people score in standard academic subjects. Many people who **have** worked at some of the world's leading Management Consulting firms probably would **not** score above 70%, if you score 50%, you can still likely receive offers from top-firms. Therefore, do not

become discouraged, upset, or angry if you don't receive as high a score on this tool, as you do in your other academic subjects. People have requested that I develop a tool to assess their quant skills, and identify quickly whether this course can help them improve, and this resource is the result. This **Quiz** and **Scoring Guidelines** reflect my best forecast for how you would fare in consulting interviews, encapsulated into a self-service resource, and also identify whether you can benefit from the ***FastMath Ace the Case*** **Online Course**. If you are not prepared for a "brutally honest" third-party assessment then do not use these resources.

Also, I recommend against comparing scores with your friends, (unless the same person does the scoring for a group of people) as some people may inflate their score, or adhere to the stringent scoring guidelines.

# Solutions

1. What is $5{,}000 \times 17{,}000$ ? (4 Pts)

**Answer**: $85\ Million$

**Typical Solution Methods**

This question also tests place value and handling of zeroes. A typical solution will use long multiplication and write out all the zeroes, or calculate $17 \times 5$ and then add six "0"s to the end.

***FastMath* Solution Method**

We use the following abbreviations for units:
$K$: One Thousand
$M$: One Million
$B$: One Billion
Use the fact that $(1\ K \times 1\ K = 1\ M)$ and calculate $(5 \times 17 = 85)$ mentally. The answer is then $85\ Million$.

**Scoring Guide-lines: 4 Points Total**

- 2 Pt: Correct answer of $85\ M$ with longhand calculation and writing out all "0"s
- 4 Pts: Correct answer calculated by handling all "0"s mentally without writing them down. You can write out the calculation $(5 \times 17)$ if necessary.
- 0 Pts: Incorrect answers

**Question 1 Score:** _____

2. A major automobile manufacturer is launching a luxury electric sedan. They expect their average selling price to be $\$75{,}000$, and to sell $28{,}000$ cars next year. What will their expected revenue be from this car next year? (8 Pts)

**Answer**: $\$2.1\ Billion$

**Typical Solution Methods**

The first Typical Solution Method for calculating this answer is to use "long multiplication" and write out:

$\begin{array}{r} 75{,}000 \\ \times\ 28{,}000 \\ \hline \end{array}$ or $\begin{array}{r} 75 \\ \times\ 28 \\ \hline \end{array}$ and then add the appropriate number (six) of "0"s,

The second Typical Solution Method is to multiply $20{,}000 \times 75{,}000$ and add $8{,}000 \times 75{,}000$ which is effectively the same calculation.

***FastMath* Solution Method**

Use the facts that $(75 = \frac{3}{4} \times 100)$, and that

$(1{,}000 \times 1{,}000 = 1{,}000{,}000;\quad 1\ K\ \times\ 1\ K\ = 1\ M)$

Then calculate as follows:

$\frac{1}{4} \times 28 = 7$

$\frac{3}{4} \times 28 = 28 - 7 = 21$

$28 \times 75 = \frac{3}{4} \cdot 28 \cdot 100 = 21 \cdot 100 = 2{,}100 = 2.1\ K$

$(2{,}1\ K) \cdot (1\ M) = 2.1\ B$

**Scoring Guide-lines: 8 Points Total**

- 2 Pt: In-exact answers in range of $\$2\ B - \$2.5\ B$
- 4 Pts: Answer of $\$2.1\ Billion$ calculated with long-hand method and writing out all "0"s
- 6 Pts: Answer of $\$2.1\ Billion$ calculated with "standard multiplication" of $75 \times 28$, and then adding six "0"s or multiplying by $1\ Million$. This score only applies if you did not write out all the zeroes.
- 8 Pts: Using ***FastMath*** methods described above that $(75 = \frac{3}{4} \cdot 100)$ and that $(1\ K\ \times\ 1\ K\ = 1\ M)$
- 0 Pts: Answers outside the range of $\$2\ B - \$2.5\ B$

**Question 2 Score:** _____

3. What is $570 \div 15$ ? (4 Pts)

**Answer:** $38$

**Typical Solution Methods**
Calculating with using long division.

***FastMath* Solution Method**
Another way to calculate the answer is to compose $570$ as $(600 - 30)$ and divide each of these elements by $15$, and subtract the results:
$(600 \div 15 = 40)$
$(30 \div 15 = 2)$
so $(570 \div 15 = 40 - 2 = 38)$

You could also divide the elements of $600$ and $30$ by $30$ and then double the answers (because $15$ is half of $30$)

**Scoring Guide-lines: 4 Points Total**
- 2 Pt: Correct answers with long division
- 4 Pts: Treating $570$ as $(600 - 30)$ and dividing these elements by $15$ (or by $30$ and doubling the result).
- 0 Pts: Incorrect answers

**Question 3 Score:** _____

Give the following three answers as percentages to **three significant digits**. Example: $4 \div 16 = 25.0\%$

4. What is $1{,}200 \div 1{,}800$ ? (4 Pts)

**Answer:** $66.7\%$ (rounded), or $66.6\%$ (truncated). The true value is a repeating decimal: $66.66\ldots\% = 66\frac{2}{3}\%$

**Typical Solution Methods**
Calculating this using long division, perhaps after canceling the zeroes.

***FastMath* Solution Method**
Reduce this fraction to ⅔, and know that ⅔ is $66.66\ldots\%$ (it's a repeating decimal with the digit '6' only).

**Scoring Guide-lines: 4 Points Total**

- 1 Pts: Answers beginning with 66% but incorrect other digits
- 2 Pts: Correct answer of 66.6% or 66.7% with long division
- 4 Pts: Reducing to ⅔, and the converting to 66.6% or 66.7% without long division.
- 0 Pts: Other incorrect answers

**Question 4 Score:** _____

5. What is $400 \div 2{,}400$ ? (6 Pts)

**Answer:** 16.7% (rounded), or 16.6% (truncated). True value is $16\frac{2}{3}\%$.

**Typical Solution Methods**

A typical solution is to calculate this using long division, or reduce to ⅙ and then do long division from there.

***FastMath* Solution Methods**

Better solutions are to learn the decimal/percentage equivalent of ⅙ or to divide the decimal equivalent of ⅙ by 2.

**Scoring Guide-lines: 6 Points Total**

- 3 Pts: Answer of 16.6% or 16.7% with long division (or any answer from 16% – 17%)
- 6 Pts: Reducing to ⅙, and the converting to percentage format by knowing that fraction, or dividing 33.3% (⅓) by 2.
- 0 Pts: Incorrect answers

**Question 5 Score:** _____

6. What is $340 \div 120$ ? (6 Pts)

**Answer:** $283.3\%$

**Typical Solution Methods**
Using long division and not simplifying the division problem by canceling common terms.

***FastMath* Solution Method**
You can factor out a $20$ from both terms which gives $17 \div 6$. $17$ is one less than $18$ which is a multiple of $6$. Therefore, the answer is: $(3 - \frac{1}{6}) = 300\% - 16\frac{2}{3}\% = 283\frac{1}{3}\%$

**Scoring Guide-lines: 6 Points Total**
- 2 Pts: Failing to cancel common terms when doing division, or final answers in range of $270\%$ – $300\%$.
- 4 Pts: Canceling common terms and reducing to $17 \div 3$, with final answer in range of $280\%$ – $290\%$.
- 6 Pts: Reducing to $3 - \frac{1}{6}$, and then calculating $\frac{1}{6}$, or similar methods, with final answer in the range of $283\%$ – $284\%$
- 0 Pts: Incorrect answers outside of the range $270\%$ – $290\%$.

**Question 6 Score:** _____

7. A firm had revenue of $\$500$ *Million* in $2013$. Their revenue is expected to grow by $5\%$ for the foreseeable future. What will their approximate revenue be in $2017$ if these forecasts hold? (4 Pts)

**Answer:** Approximately $\$600$ *Million*

**Typical Solution Methods**
Some candidates try to compound $5\%$ over $4$ years and calculate the revenue in each year exactly up until the final year. In Case Interviews, you aren't typically expected to do compound growth calculations, and they expect you to make simplifications.

***FastMath* Solution Method**
$5\%$ growth per year over $4$ years is approximately ($4$ • $5\%$ = $20\%$) growth.
$20\% \cdot \$500\ M = \$100\ M$, so the firm's revenue grows by approximately $\$100\ M$; with an initial value in $2013$ of $\$500\ M$, the revenue in $2017$ will be approximately $\$600\ M$.

**Scoring Guidelines: 4 Points Total**

This is meant to be a **very** simple calculation. No points awarded for attempting to compound 5% growth over multiple years.

- 0 Pts: Incorrect answers or calculations with compound growth
- 4 Pts: Approximating growth as 20% (4 • 5%) and taking 20% of $500 $M$ to calculate the increase in revenue

**Question 7 Score:** _____

8. Your client manufactures a product which costs $50 per unit to produce. They want to have 20% margin on all sales. What should their sales price be? (8 Pts)

**Answer:** $62.50

**Typical Solution Methods**

Calculate the markup by taking 20% of the production cost:
$20\% \cdot \$50 = \$10$. Therefore, the typical solution will find the selling price to be:
($\$50 + \$10 = \$60$). This is incorrect because the ***Profit Margin*** is then:

$$\frac{\$10}{\$60} = \frac{1}{6} = 16\tfrac{2}{3}\% \neq 20\% .$$

***FastMath* Solution Method**

The proper way to solve this is to identify that if the Profit margin is 20%, then the production cost must equal 80% of the selling price, where $80\% = 100\% - 20\%$.
The ***Price*** $(P)$ can be calculated as:

$$P = \frac{\$50}{0.80} = \frac{\$50}{\frac{4}{5}} = \$50 \cdot \frac{5}{4} = \$50 \bullet (1 + \frac{1}{4}) = \$50 + \frac{\$50}{4} = \$50 + \$12.50 = \$62.50$$

The markup is therefore 25% of the manufacturing cost which means the ***Profit*** is $20\% = ⅕$ of the selling ***Price*** of $62.50.

**Scoring Guidelines: 8 Points Total**

- 2 Pts: Answer in range of $60 (which is incorrect)
- 4 Pts: Correct answer with algebra.
- 6 Pts: Correct answer calculated by dividing $50 by 0.8 without algebra
- 8 Pts: Correct answer calculated by dividing $50 by 0.8 and converting 0.8 to $\frac{4}{5}$, and calculating the markup to be 25% of the manufacturing cost
- 0 Pts: Other incorrect answers.

**Question 8 Score:** _____

9. Your client sells $1.5$ *Million* cases of canned food per year at $\$30$ per case. If they lower their prices by $10\%$ which increases their sales volume by $20\%$, what is their percentage change in annual revenue? (14 Pts)

**Answer:** $8\%$ increase in revenue.

**Typical Solution Methods**

A typical solution will solve for the initial revenue, the new prices and sales volumes (after the price change) the new revenue and then calculate the change in revenue, and then divide the change by the initial revenue.

This is not the most efficient solution, and it is also error prone. Many people make mistakes in this calculation, or cannot do the last step efficiently of dividing the change in revenue by the initial revenue to calculate the percentage change.

***FastMath* Solution Method**

A faster way to do this is to calculate it as follows: $(0.9 \bullet 1.2) = 1.08$ which is $0.08$ above $1$, which corresponds to an $8\%$ increase in revenue. If you didn't follow this solution, it is explained in more detail in the course.

**Scoring Guidelines: 14 Points Total**

- 0 Pts: Answers outside the range of $5\%$ – $15\%$.
- 4 Pts: Rounding values for the new ***Price*** and ***Quantity*** which leads to different answers, or mistakes in the calculations which give an answer inside the range of $5\%$ – $15\%$.
- 8 Pts: Correct answer by calculating the ***Initial*** and ***Final Revenue***, and the final ***Price*** and ***Quantity***, correctly finding the change in revenue ($\$3.6$ $M$), and dividing by the initial revenue of $\$45$ $M$, using long division.
- 10 Pts: Correct answer by calculating the Initial and ***Final Revenue***, and the final ***Price*** and ***Quantity***, correctly finding the change in revenue ($\$3.6$ $M$), and dividing by the initial revenue of $\$45$ $M$. This score is received for canceling the common factor in $3.6$ and $45$, which is $9$ before doing the division.
- 14 Pts: Correct answer calculated by multiplying $(0.9 \bullet 1.2)$ or similar method using just the percentage changes, and not solving for the ***Initial*** or ***Final Revenue,*** or the ***Final Price*** or ***Quantity***.

**Question 9 Score**: _____

10. Your client sells a product at $30 per unit and sells 140,000 units per year. If they drop their price by 20%, what percentage increase in units sold do they need to break-even on revenue? (18 Pts)

**Answer:** 25% increase in units sold

**Typical Solution Method**

A typical solution will calculate the initial ***Revenue***, the new ***Price***, and then calculate the new require number of units sold and then calculate this as a percentage of the initial value. This is not the most efficient method and is also error prone.

**FastMath Solution Method**

The answer can be calculated solely from knowing that the ***Price*** dropped by 20%, and this method is explained in the ***FastMath Ace the Case*** Online Course.

- 4 Pts: Assuming the volume increase is the same as the price change, but in the opposite direction (i.e. 20% increase in sales volume) with no supporting calculations.
- 8 Pts: Minor mistakes or approximations with answer in the range of 20% – 30%
- 12 Pts: Correct answer of 25% increase determined by calculating the initial Revenue, the new Price and then the new number of units and then calculating the percentage change.
- 18 Pts: Correct answer of 25% increase calculated from the percentage price change only. This method is explained in the ***FastMath Ace the Case*** Online Course. This score is only received if you don't calculate the ***Revenue*** or the new ***Price***.
- 0 Pts: Answers outside the range of 20% – 30%.

**Question 10 Score:** _____

11. Estimate the number of gas stations in the United States? (12 Pts)

**Answer:** There are $120\ K - 130\ K$ gas stations in the US depending on the source refer to.

**Typical Solution Methods**

There are many ways in which people do market sizing and estimation problems, and I cold not describe them all. Many people make their calculations too complex and with $8 - 10$ parameters. There is a tradeoff of complexity and accuracy, and the increased complexity takes significantly more time and yields only small increases in accuracy.

***FastMath* Solution Method**

Estimate the ratio of residents per gas stations in the United States. More detailed approaches will segment the population into urban, suburban and rural, and estimate the percentage of the population and the number of gas stations per resident in each segment. Using a single ratio is feasible because a small percentage of the overall population is in rural areas, and suburban areas are simple extensions of metropolitan regions.

Using a ratio $1$ gas station per $3\ K$ residents gives a very quick estimate of $100\ K$ gas stations given that the population of the US is approximately $300\ Million$ people; using a ratio of $1$ gas station per $2.5\ K$ gives $120\ K$ gas stations (which is closer to the actual value); using a ratio of $1$ gas station per $2\ K$ gives $150\ K$ gas stations in the US.

The ***FastMath Ace the Case*** Online Course gives more detail about how to estimate the ratio of residents per gas station based on other information. A common way to do this is to count the number of gas stations in an area you are familiar with (for example, your home town); then if you know the population (or estimate it) for that region, you can calculate the number of residents per gas station in that region, and then extrapolate it out to the entire United States.

**Scoring Guidelines: 12 Points Total**

This is difficult to give a comprehensive scoring guidelines for because there are so many ways to estimate this.

- 12 Pts: Using a ratio of residents per gas station of between $1.5\ K$ and $3\ K$, giving estimates of $100\ K - 200\ K$ gas stations, or segmenting the population into urban, suburban and rural, with final estimates in the range of $100\ K - 200\ K$ gas stations. Other methods which give values in this range should receive the same score, if the calculations are done very quickly.
- 10 Pts: Similar estimates based on population ratios with final answers in the range of $50\ K - 300\ K$, (but outside the range of $100\ K - 200\ K$).

- 8 Pts: Answers in the range of $50\ K - 300\ K$ which take more than a few minutes to calculate, and use several parameters. For example, if you calculated how often people fill their car with gas, and then the throughput of customers at a gas station, and then the number of gas stations necessary to service the US population, that fit into this category.
- 6 Pts: Similar frameworks as above, but answers outside of $50\ K - 300\ K$.
- 4 Pts: No structured framework for answering this question, but uses a pure "guesstimate" with no data to back up that answer.
- 2 Pts: If you don't know that the population of the US is about $300\ M$ ($320\ M$), and you are applying to a consulting firm's office located in the US.

**Question 11 Score**: _____

12. Your client manufacturers and sells a consumer product. Each unit sells for $\$75$. Their factory has monthly rent of $\$80{,}000$, utility costs of $\$50{,}000$, and equipment maintenance costs of $\$70{,}000$. The materials cost is $\$35$ per unit, and the labor cost is $\$15$ per unit.

A) How many units do they need to sell each month to break-even? (6 Pts)

**Answer:** $8\ K$ units per month

***FastMath* Solution Method**

Total Fixed costs are $\$200\ K$ per month, and the **Marginal Profit** (**MP**), or **Contribution Margin**, per unit is $\$25$. Therefore the answer is $\$200\ K \div 25 = 8\ K$ units.

**Typical Solution Method**

Many candidates will solve this problem with algebra using the Total Revenue = Total Costs. This approach can be very cumbersome. Better approaches are to calculate the Margin Profit and total Fixed Costs and then divide these quantities for the break-even sales volume, as described above.

**Scoring Guidelines: 6 Points Total**

- 3 Pts: Correct answer with extensive algebra without immediately calculating total Fixed Costs and Marginal Profit.
- 6 Pts: Immediately calculating total Fixed Costs and Marginal Profit, and then dividing these quantities to find the break-even production volume. No Algebra is used to achieve this point score.
- 0 Pts: Incorrect answers.

**Question 12A Score**: _____

B) How many units do they need to sell to have a profit of $\$1\ Million$ per month? (6 Pts)

**Answer:** 8 $K$ units per month

**Typical Solution Method**

Most candidates will set up an algebra equation for the profit based on the sales volume, which takes into account the Fixed Costs, and all the relevant manufacturing costs, and then set that equal to $1 M and solve for the sales volume. This approach does not make use of the break-even sales volume calculated earlier, which makes the calculations easier.

***FastMath* Solution Method**

Given that the break-even sales volume is 8 $K$, the firm generates a profit of $25 for each incremental unit it sells. Therefore, to have a profit of $1 *Million* the firm must sell ($1 $M \div$ $25 = 40$ $K$) units above the break-even sales volume. Therefore, the total number of units sold is 48 $K$ (8 $K + 40$ $K$).

**Scoring Guidelines: 6 Points Total**

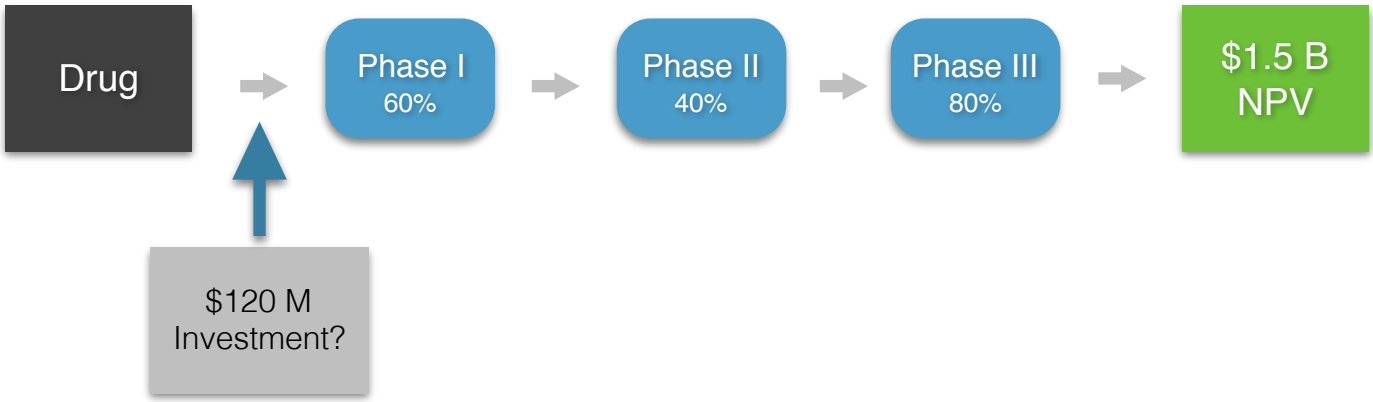
- 3 Pts: Correct answer calculated with algebra without using the break-even sales volume calculated earlier.
- 6 Pts: Calculating the increment sales volume by dividing $1 $M$ by the **Marginal Profit** of $25. Zeroes are handled in an efficient manner.
- 0 Pts: Incorrect answers.

**Question 12B Score**: _____

**Total Time:** _____

## Extra Credit Problem

13. Your client is a pharmaceutical manufacturer who is about to begin FDA clinical trials on a new drug. If the new drug successfully passes all three phases of clinical trials, your client will gain a profit stream which has a **Present Value** of $\$1.5$ *Billion*. The historical success rates for each phase of the clinical trial are 60%, 40%, and 80% for Phase I, Phase II, and Phase III respectively. The drug must pass all three phases in order to generate revenue. (10 Pts)




Your client is considering making a $\$120$ *Million* investment which would increase the number of participants in the Phase II trials which they believe will boost the success rate of the Phase II trials. This investment must be made prior to entering Phase I. What percentage increase in the Phase II success rate would your client need to achieve in order to justify this investment?

**Answer:** $16\frac{2}{3}\%$. The **Phase II** Success Rate must increase by $16\frac{2}{3}\%$ from $40\%$ to $56\frac{2}{3}\%$.

***FastMath* Solution Method**

You'll have to buy the ***FastMath Ace the Case*** Online Course course to see the ***FastMath*** solution method.

**Typical Solution Method**

Don't feel bad if you had trouble with this problem as this is the toughest quant problem I have seen in a consulting case interview. A very similar problem (with different numerical values) was given by a top tier management consulting firm in first-round interviews. In my experience, most MBA students have trouble setting up the conceptual structure to solve this problem. The barriers to solving this problem for most candidates are more than just not being able to do calculations without a calculator. Some candidates have the proper structure, but then have difficultly calculating a numerical answer. I would estimate that very few MBA students would correctly solve this problem under interview conditions, in less than 10 minutes.

# Interpreting Your Score

It is difficult to make predictions based on the results of the ***FastMath Ace the Case*** **Quant Self-diagnostic Quiz** because I do not have enough data on people's score on this **Quiz** and the outcomes of their consulting interviews. Interpreting the results will become easier as I collect this data.

Below is my current predictions for how your scores on these questions would correlate with your results interviewing at the top Management Consulting Firms. The ranges below are rough guidelines. While the exact numbers for each range are subject to change, and be updated as more people take the **Quiz**, I believe the rough categorizations are accurate: there are people who are weak at quant and need to improve, there are people who have adequate quant skills for consulting interviews, and there are people who excel in the quant portion.

## Scoring Ranges

**Scores Under 40 Points**
People who score in this range would likely struggle with the quantitative component of case interviews. Many interviewers are likely to believe that your quant skills aren't strong enough for the job, and as a result, you may not move forward in the interview process. You may still receive offers from top firms if you are truly **outstanding** in other areas of the interview. Most likely, your current level of quant skills are an obstacle or a hurdle to you getting offers from some or many of the firms you interview with. You would certainly learn quite a lot by taking the ***FastMath Ace the Case*** Online Course.

**Scores from 40 – 70 Points**
People who score in this range are likely to have quant skills which sufficient to perform the calculations required in most consulting interviews: they're not holding you back, but they aren't differentiating you either. Many successful candidates will likely have scores in this range, and so will many **unsuccessful** candidates. With this level of quant ability, in order to succeed in consulting interviews with this level of quant ability, you will need to stand out from candidates in others aspect of the interview besides quant skills. Note that if you have a very strong quantitative background, or are a PhD candidate or, the interviewer may have higher expectations of your quant skills than they would expect from a typical MBA student.

The ***FastMath Ace the Case*** Online Course course can help you take your skills to the next level, where you will truly excel in the quantize portion of interviews and stand out from other candidates.

**Scores of over 70 Points**
People who score in this range are likely to excel in the quantitative portion of the case interview. You will come across "sharp" and quick with numbers during the interview, which will differentiate you from other candidates. Some firms, such as McKinsey, place heavy emphasis on quant skills, and having very strong quant skills is seen as very positive. At other firms, one must simply have quant skills above a "minimum" level (or bar) and you are exceeding this bar.

Unless you received a perfect score of 100, and you solved the Extra Credit Problem correctly, then there is still room for improvement. The ***FastMath Ace the Case*** **Online Course** can help further refine your quant skills; given that you probably like math (based on your score), you might even enjoy the course.

# Time

Ideally, you should be able to solve all the problems in the ***FastMath Ace the Case*** **Quant Self-diagnostic Quiz** in under 1 hour (not including the Extra Credit Problem). Note that you typically have 5-10 minutes to solve the quantitative problems in a case interview, so there are implicit time constraints during the case interviews, and interviewers will notice if you are slow with the quant component. If you took significantly longer than 1 hour to solve the problems in the **Self-diagnostic Quiz**, then you will likely run into time pressure in case interviews. You should take this into account as you continue your interview preparation and keep in mind that you may have received a lower score on the **Self-diagnostic Quiz** had you limited yourself to 1 hour. If you took longer than 1 hour on the **Self-diagnostic Quiz**, the ***FastMath Ace the Case*** **Online Course** can help improve your calculation speed and could be a great benefit during interviews.

# Resources

To improve your quant skills, take the ***FastMath Ace the Case*** **Online Course**. This course covers all the quant skills you need to succeed in Case Interviews. The first half of the course teaches techniques to perform numerical calculations quickly and efficiently without using a calculator or spreadsheet (as required in case interviews). The second half of the course reviews the most common types of quantitative problems given in case interviews. More information is available on the course page (see above link).

# Scoring Sheet

| Question | Points | Maximum Points |
|---|---|---|
| 1 | | 4 |
| 2 | | 8 |
| 3 | | 4 |
| 4 | | 4 |
| 5 | | 6 |
| 6 | | 6 |
| 7 | | 4 |
| 8 | | 8 |
| 9 | | 14 |
| 10 | | 18 |
| 11 | | 12 |
| 12 (A & B) | | 12 |
| **Total** | | **100** |

| | |
|---|---|
| **Total Time** | |