

IIMs versus FMS, XL, MDI and other top schools

Now that the first round results of almost all the b-schools are out, we get regular queries about which b-schools to join. There is rarely any confusion about A, B and C but after that it seems as if aspirants are having a lot of trouble choosing between the IIMs L, I and K and other top b-schools such as FMS, XLRI, MDI and others. How does one go about making the right choice between the IIMs and other top schools? One of the terms thrown around a lot these days is ROI.

How you should really calculate ROI

A few years back an aspirant I was speaking to after an ISB info session said

- Sir, these days even IIM-A does not offer a great ROI, the average salary and fee are more less close to each other.
A lot of aspirants tend to use ROI to evaluate colleges. They tend to use ROI in conjunction with batch size to decide which college to join where ROI is simply taken to be Average Salary/Cost of Education.

Well once you do an MBA you will realise that more than an ROI, the better tool to use will be a Cost-Benefit Analysis since you are not investing in a pure financial instrument or land or gold.

Whenever one does a cost-benefit analysis one has to consider not just the tangible but also the intangible costs as well as benefits.

The intangible benefits or the benefits to which you cannot put a number are the ones that most aspirants on the verge of joining an MBA program, those who are doing their MBA and those who have just graduated are unaware of. This post will deal with all of these intangibles that might help aspirants to make a decision.

The three letters I-I-M carry more weight than you can imagine

Firstly, no aspirant should forget that the second most prestigious & valuable prefix that an institution in this country can carry is IIM. When most aspirants start preparing for the CAT, they do not tell themselves that they want to crack XL or MDI or FMS, it is always the IIMs that are on most people minds.

The same hold true for the rest of the business management fraternity — the word IIM carries a lot more weight than you can imagine. People evaluating you at your work place are more likely to pull down an IIM grad at the slightest hesitation saying “How can this person be from an IIM” than they are to say “How can this person be from MDI or XL” (I overheard this as recently as last Sunday at a cafe).

The IIM-tag predisposes people to think positively about you

When you introduce yourself as an IIM graduate, people’s perception of your ability becomes vastly exaggerated. People will tend to treat you as being good unless you yourself prove them wrong. Whereas those from other brands are viewed neutrally and they have to prove themselves. It goes without saying the same applies when people look at your resume.

And if you are from say L, I and K and become a great professional, people might tend to think that you are from A, B or C; they might even assume you are from an IIT as well!

An MBA is about a lot more than your first job

The problem with the ROI method is that it places an unduly high importance on the short-term result — the first job you get out of campus. Don’t you think that is barely any return! Good investments yield returns over a longer time-period and a good MBA is also supposed to do the same.

You might not get your dream job even at IIM-A

On campus recruitments are very unlike recruitments off campus and this difference is key to understanding the long-term value of an MBA.

During placements on campus, recruiters are constantly comparing you with a huge list of other candidates they have at their disposal. For recruiters it is like a buffet with many awesome things to choose from but with one constraint — time and competing recruiters!

So what do companies do? They start using various filters to ensure that they look at fewer people and somehow get the people they want before their competitors get them. What are the filters that get applied? They vary from company to company but to name a few

- **the brand of the college you graduated from (everybody wants to get into McKinsey but they can't possibly interview everyone, so they use the college brand as a filter)**
- **leadership positions held (so guys with big leadership roles on campus get filtered in over may be people with a better CGPA) etc**

So intense is the competition among companies that this year one prominent consulting firm at IIM-A was even willing to forego the final interview round if the people who they shortlisted so far were still not picked up by others. Imagine, they were scared that by the time they finish their process, they will no have candidates left!

Compare this with an off-campus process. Firstly, it is not a 3-day affair, so companies are not in any hurry to shortlist and interview people as fast as possible. So you will end up getting a fairer shot and enough time to make a good case for your candidature.

Companies do not need people only at the time of campus placements. In fact most fresh MBA graduates, quit their first jobs within a year! There is a constant need for people all year round and they scour various portals and recruitment agencies to get resumes.

So you do not need to worry about the campus placements being final summit or crowning point to reach. In fact it is just the beginning of the climb.

What the MBA gives you is a platform to reach the top over the course of your career.

It's your peer network that will get you jobs in the long run

Campus placements last only a few days but your peer network, network of immediate seniors and alumni network will be the ones that will be getting you jobs over a longer period.

When you graduate from an IIM, you graduate with access to a network of people working in the best companies in the country. You will not come to know of openings through Naukri or other portals but from your peers since firms hire a lot through referrals.

Also you get access to platforms such as IIM Jobs through which candidates and recruiters find each other. A student who just graduated from IIM-A told me that after graduating this March he was approached by three companies via IIM Jobs.

Can you place a monetary value to the opportunities that this network will open up for you?

If you want to start your own firm, the tag is invaluable to attract investors

Investors are always taking bets on people as much as they are on ideas. Even before you pitch your ideas, investors will be aware of all the hot ideas and opportunities that are present in the market. So in essence they are only evaluating the capability of the team and one of the things that goes a long way in boosting your credentials is the IIM-tag.

So keeping all of this mind how should you make your choices?

IIMs – L, I & K versus FMS, XLRI, S.P.Jain, MDI

Technically I would always place the old IIMs above all other schools purely for the reasons mentioned above.

The only exception can be FMS, for the almost non-existent fees! How does one break this deadlock? Choose FMS over the others if

- If you have already done your graduation from an IIT and/or
- If you are sure you want to explore entrepreneurship options immediately after your MBA
What is the rationale behind this?

Firstly, If you have not studied at a premier national-level college, whilst staying on campus in the hostel, an education at FMS or S.P.Jain will be incomplete in terms of the experience.

You will do an MBA only once and the experience of studying in an awesome campus (in contrast to FMS, S.P.Jain and NMIMS) dedicated primarily to the program you are doing (in contrast to MBAs at IITs) is something that you will cherish for life.

If you have already experienced the same during your graduation then you can go ahead and choose FMS, else the IIMs.

Secondly, if you want to start working on your own venture straight out of college then education loan will always be an albatross around your neck, making FMS best option.

Choose other colleges over new IIMs

When it comes to the choice between new IIMs and other schools such as IITs, choose other top schools over them since you will get the benefit of the degree only over a very long-term, when they are no longer considered new.

Also, everything else right from campus, to college culture and placements will just be beginning to take root and hence leave you quite a bit on the backfoot in the short-term. There is also be no network of peers of seniors through whom you get access to jobs.

You are not investing in a college you are also investing in yourself

Most view the expenditure on an MBA from the *what-am-I-getting-for-what-I-am-paying* lens, making it the college's responsibility to deliver. Well, unfortunately the college owes you nothing.

The college deems you suitable for a career in management and has offered you a seat giving you access to

- the learning that they can offer and
- the best firms in the country

You are investing this money to acquire this education and this network to maximise your potential and your career opportunities.

Most of the time what you study during the course will barely be used in the first few years of your life as an MBA. It will only start making sense when you come into big decision-making roles later in life (even those subjects which you will find most useless on campus).

You are not learning subjects that will help you do your first job better. You are learning and developing the skills to lead a company later.

So it makes a lot of sense to view things not from an immediate placement perspective but from the perspective of maximising your chances of leading the best firms or starting a successful firm of your own.

I hope this article goes some way in helping aspirants view things from the different perspective and resolve the queries in their mind but please bear in mind that the views expressed in this article are purely personal and aspirants are advised to take their own decisions depending upon the variables they wish to maximise.

My 2 cents from a lifetime experience called MBA

Over the past few years of mentoring there are always students who keep in touch even after they graduate from b-school. Some to express gratitude once they get their final placement, some to sort out their post MBA dilemmas and others just to have a nice chat about everything under the sun :-).

Likewise this year a student of mine who graduated this March, wrote to me saying that he felt investing in an MBA was the best thing he did and over the course of a few mails I asked him to do a guest post about his MBA experience.

Given that a lot of aspirants who made it to b-schools will be debating the pros and cons, thinking about the cost involved whether it is worth it, the better schools you missed out on and stuff, this post is timely.

Two years back I remember this student also being in the same dilemma. He was wondering whether it was really worth leaving his job at Ford to do an MBA. I felt he should since over the longer-term you need an MBA not just to be given the big roles but also to do justice to them.

This is his take on his MBA experience. Please note that this purely one student's take based on his personal experience.

As the euphoria of finally becoming an 'MBA' from a top b-school (NMIMS Mumbai) settles down and I try adjusting to the slow paced life of Kerala (*Read: missing Mumbai*

Meri Jaan), I take a look back the at the rollercoaster 2-year journey.
Should I do an MBA or Not?

I belong to the 'IIM' category – Indian IT Male and yes an Engineer too :-).

(*Read: mechanical engineer not worth his salt , i.e MBA – exit strategy!*). However, there was only one problem. I was a 'Serial CAT Loser' who just couldn't make the cut. Meanwhile, I was working as an IT Business Analyst at Ford Motors and kept punching at Management entrance exams. When I finally managed to clear NMAT and CDPI process at 3.5 years of work-ex, I faced one of the biggest Dilemmas of my life

"Does quitting the job from a reputed MNC at this stage of career makes sense?"
"Is investing 2 years and a whopping sum as fees justified???"

"What is the ROI ?"

"Can I survive the fierce competition in the B-school Rat Race?"

"Do I have it in me to secure a dream Job?"

Though these questions haunted me, I took a leap of faith and took the MBA plunge

First-year Snapshot

Trimester 1

After one week of hectic, but insanely fun induction program trimester 1 lectures started. The first class of MBA was Financial Accounting and madam greeted us with a surprise Quiz! Being a ‘Pseudo engineer’ who doesn’t know the difference between debit and credit, FAA test was a tight slap in the face. I looked around desperately only to find my neighbours circling answers vigorously! The icing on the cake was the DCP (*Read: Desperate Class Participation*) that followed and I sat there thunderstruck, quiet as a mouse! Being a self-critical ‘mallu’, I decided to keep my mouth shut and let people wonder if I am stupid rather than open my mouth and dispel any doubt :-). Just when I thought it couldn’t get any worse with assignments, case studies, and presentations, I was flooded with cell applications. I can confidently say my junior placement committee interview was the toughest interview I faced till date and it was quite an experience on its own! I got neck deep in academics, cell work and the pressure began to mount. I struggled, but I survived. Trim 1 went in a blur and before you know it was time for summer placements.

Trimester 2

Madness followed. With God’s grace, I managed to scrape through my first shortlist at GE and breathed a sigh of relief. I saw students ecstatic in converting dream companies. I saw people crumble under pressure with their dreams shattered. I saw people partying like no tomorrow. I saw people waiting with bated breath for the dreaded shortlist (*Which no astrologist can ever predict!*). I saw them struggle, but they survived. It was during this phase, I discovered my passion for helping people with Hygiene questions and SOP’s. I conducted mock GD’s and PI’s and helped some of them sail through placements. The experience was truly humbling.

Trimester 3

The highlight of Trim 3 was the civic engagement program where I got an opportunity to interact with the less privileged sections of the society and undertake community development activities. It was humbling to realize how oblivious I was to the weaker sections of society around me and what an opportunity we have to make a small difference to their lives.

My 2 cents to those embarking on their dream journey

1. MBA is a marathon, not a sprint

The best thing you can do to yourself to help you run this exhausting, nerve-wracking, yet fulfilling marathon is to try and make few non-transactional friends. (Yes you can

find gold in copper mines if you dig hard enough) Invest your time and energy in the gems you may find in MBA life and you will reap rich dividends. They are your family at B-school and they will get your back when the going gets tough whether it is the dreaded placement season or when you question “the purpose of life” (*read – why am I doing MBA! over a bottle of beer by Juhu beach*). You will be knocked out in a couple of sprints, but keep punching till finish line and marathon belongs to you.

2. Peer learning:

As clichéd as it sounds, your class is an amalgamation of highly talented folks from all over the country. From the finance wizard who is kind enough to help you pass FAA to the guy who makes killer presentations to the gal who can teach you just enough moves to impress your prospective date in next party, nothing can replace peer learning. Not to mention the goldmine of wisdom from your seniors who fix your CV (*read – most important paper of your life*) and share their 2 cents on just about everything you need to know to run the race.

3.Committees and Cells:

In my opinion, cells are a great way to “network” (*most abused word of MBA*) with a larger group of students, teachers, and corporates. It will push you out of your comfort zone and makes your MBA experience lot more enriching and fulfilling.

P.S: If ‘cold calling’ and managing a team without a stick or a carrot does not teach you patience, nothing ever will

Second-year Snapshot

Trimester 4

Competitions, competitions, and some more case study competitions. Nothing has ever pushed me to apply the concepts learned in the classroom and forced me to try and find a solution to a real-life business problem than case study competitions. I learned the basics of making an engaging presentation and faced my fears while presenting to Mahindra CEO for Mahindra War room competition.

Tip: Get your hands dirty in competitions and you will be the wiser. Not to mention interesting learning experiences you can share during placements which are worth its weight in gold.

Trimester 5

“Winter is coming!!! “: The dreaded final placement season has arrived and it’s time to put your best foot forward. You will meet two kinds of people in the season.

- The ones who are lucky enough to get placed early, who post #MBA Over (*read – if you got it, flaunt it attitude*) and party like crazy oblivious to everyone around them.
- The ones who get placed early, but have the grace not to flaunt it and make it their personal mission to help fellow batch-mates sail through the storm.

The journey of cracking the elusive shortlist, managing to say the right things at GD-PI process and waiting countless hours for the results with baited breath will take a toll on you physically and emotionally. The hardest part is to dust yourself up, put on a brave face and go back to battle again wearing the same coat and tie...This is where the relationships you have invested in during the course of MBA life could prove to be priceless. Fortunately, I escaped from “winter”, thanks to GE who was kind enough to offer me a PPO and I resumed ‘*Jerry’s school of GD-PI Preparation :-)*

Trimester 6

My only 2 cents: Party, party and party some more. As a wise classmate said “*Make memories, not PPT’s*”

As I look back at the questions that haunted me before joining, I can confidently say the answer to each one of them is: A resounding YES

Final Words:

“MBA life will throw many opportunities at you....”

“*Keep punching* at them and you will finish your marathon in flying colors“
All the best,

Jerry Alex

Preparing for an MBA and not just the CAT

The results of quite a few top b-schools are out and even now I get a lot of queries about that revolve around specializations — which specializations should I choose, I do not have any idea what my area of interest and so and so forth.

This is not surprising since in India our strategy is simple — first crack the test, then see what is the best college your percentiles can get you and then finally start thinking about specializations! The funny part is that we do not seem to learn from our mistakes since this is the same policy we followed for our graduation as well and now want to do an MBA so that we can undo the mistakes of our graduation but without having changed our standard operating procedure!

There are only a handful of aspirants who know what they want to do and more importantly who also know what a career in that field entails (it is very easy to say with absolute conviction that I want to get into investment banking without having the slightest clue about the same).

What an MBA means?

One of the misconceptions is that MBA is equivalent to management. From this simplistic equivalence comes the notion that most people hold — doing an MBA will help them play manager-manager. The most important letter of the three in MBA is B — Business!

The difference between an MBA and other degrees such as MS or CA or CFA is that with those degrees the functional knowledge you pick up in the textbooks and master is very directly applicable in the jobs that you will take up.

An MBA on the other hand prepares you at a very broad-level by giving you a framework and direction to think through the real-life business problems you will face by using real-life business case studies.

Also, you might not be directly applying most of what you learnt in your first job post an MBA. It will be a few years before you reach a decision-making position that will demand you to draw on what you learnt in a b-school and find a way to apply it to the unique business problems you are confronted with.

It is not very different to learning swimming extensively in a swimming pool for two years before being thrown out into the sea.

So given this is it not ironic that very few CAT aspirants read the Business section of the newspaper?

Also, almost all the IIMs and other top b-schools have started doing pure GK and Current Affairs interviews over the last few years. Why do they do this? They know that most Indian applicants have been excellent students in class but few have little to show for in terms of their awareness of the larger world. They use the interview process to filter out those few who know more than what they learnt in the books.

The CAT results are usually out around mid-Jan and your first interview can be before the end of Jan and there is no way that you can mug up all the current affairs over the past year in the world in two weeks!

So, the first step towards really preparing for an MBA and not just the CAT is to start reading the sections in the newspaper apart from the sports section such as the business page, the international news page and the front page.

The IIMs call 4 people for 1 seat so technically even if you clear the CAT, and you can't leave the preparation for that part of the equation for way too late in the game.

A reading list to learn a bit more about the MBA

A question that I get asked very often, that typifies the middle-class Indian mindset and one that, to put it bluntly, I hate the most is – *sir, kaun se field mein scope zyaada hai – Fin, Mark or HR?*

Well, the daftness of this question can be understood by looking at an analogous question – *sir kaun se field from scope zyaada hai – Batting, Bowling or Wicket-Keeping?*

From this, it should be very clear that the question itself is incorrect.

Your aim should be to find out about each specialization and analyze which one will you be good at. Any above-average person can be a 6 out of 10 on most things but a 6 out of 10 is not good enough for you to be really successful in the long run. You should try to find the area where you can be an 8 out of 10.

One small query will still be lurking somewhere but *kaun se field mein paisa zyaada hai*. There is enough money to give you great roti, great kapda, great makaan in every field. What you need to ask yourself is – why should someone pay you money?

The IIMs are under no obligation to ensure that you get placed. They only provide a platform for the best companies to visit their campuses and recruit their students. The 20-odd lakhs you will pay to an IIM is not a guarantee of a 20-odd lakh job because no one owes you a job!

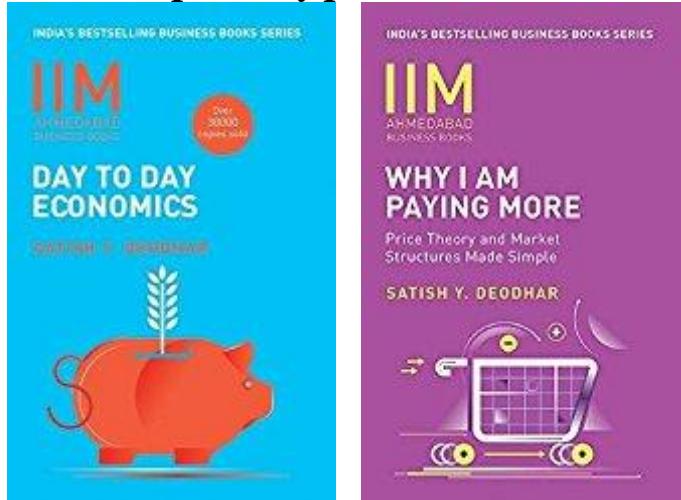
Firms will pay top dollar to top talent. What you need to spend your time on is to find the area where you have the potential to become a top-drawer talent.

A good way to begin is to start learning a bit more about *Finance* (beyond Wolf of Wall Street), *Marketing* (beyond I-can-make-better-ads-than-these), *Operations* (beyond I-

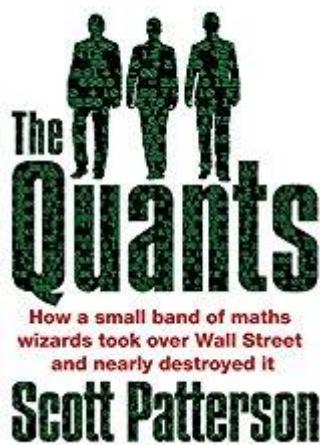
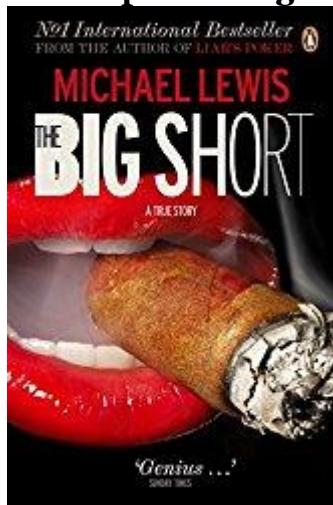
am-a-Mechanical Engineer) and *Human Resource Management* (beyond I-love-interacting-with-people).

The Finance List

Before one gets into Finance one needs to understand the basics of Economics and these are covered in an easy to understand manner in these two books — IIMA – Day to Day Economics and IIMA-Why I Am Paying More: Price Theory and Market Structures Made Simple — by professor Satish Deodhar who teaches Economics at IIM-A.

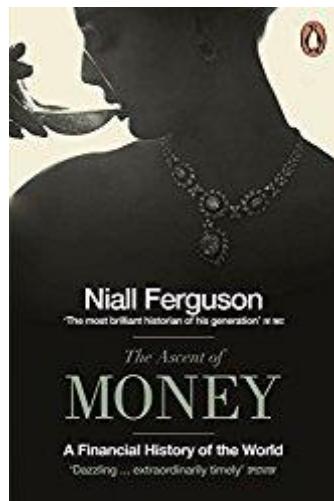
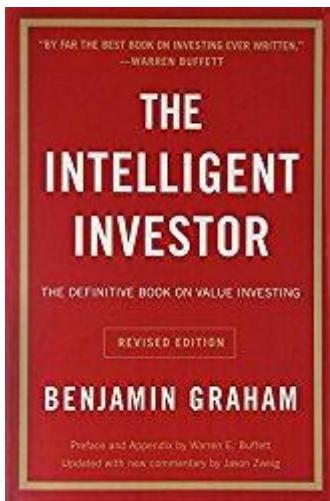


While learning the technical aspects of Finance can be left for later, you can pick up a real-world flavour of the workings of Hedge Funds, Investors and Quantitative Finance by reading these two books The Big Short: Inside the Doomsday Machine — and The Quants: The maths geniuses who brought down Wall Street — that narrate real-life events pertaining to the financial markets.



Both of the books above are very entertaining reads and the first one as some of you would know has also been made into a movie.

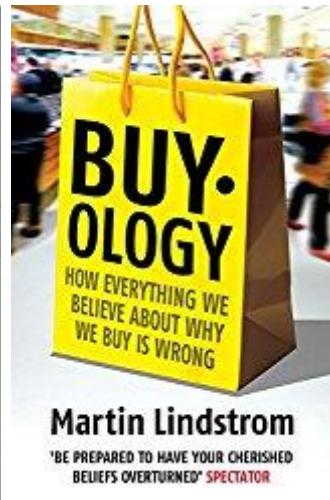
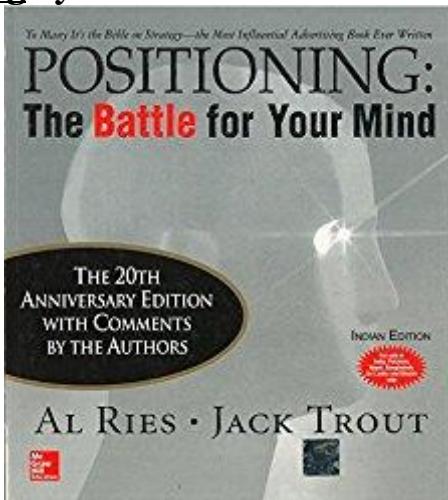
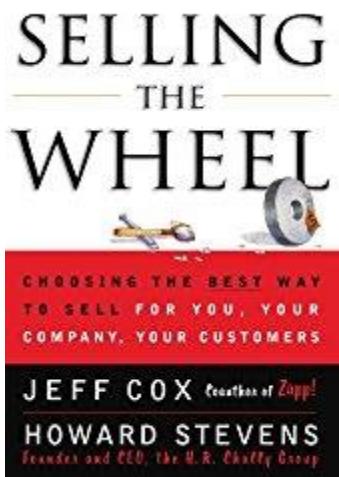
For anyone interested in trading The Intelligent Investor by Bill Graham is a must-read. For a less entertaining but more historical understanding of Finance, you can go through The Ascent of Money: A Financial History of the World



The Marketing List

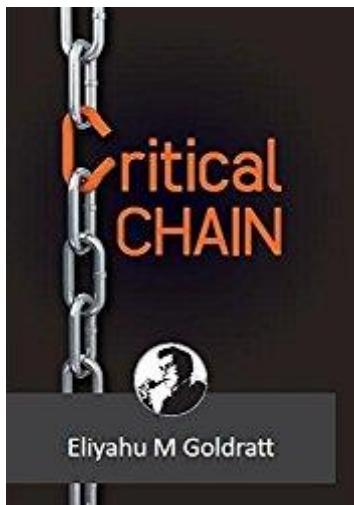
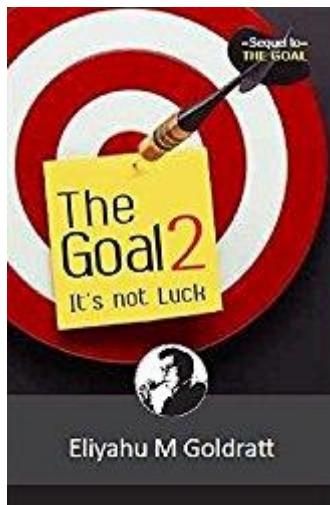
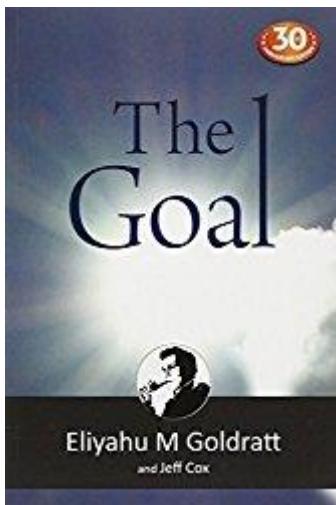
Maybe seemingly the least bookish of all disciplines and yet posing the toughest challenge for all firms — *how do we sell what we make or should it be what should we make or should it rather be what do people want?*

Not too many books that directly explain the nitty-gritty of marketing but these three should do the job — Selling The Wheel: Choosing The Best Way To Sell For You Your Company Your Customers by Jeff Cox and Howard Stevens, Positioning: The Battle for Your Mind by Al Ries and Jack Trout and Buyology: How Everything We Believe About Why We Buy is Wrong by Martin Lindstrom.



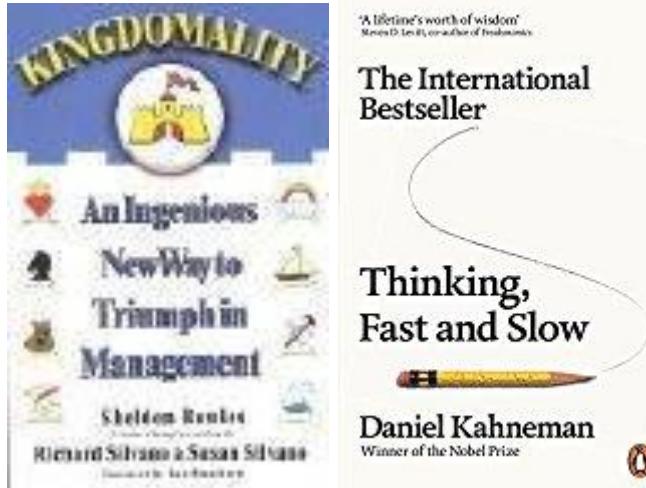
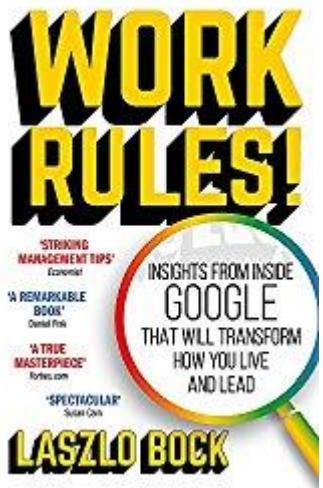
The Operations & Project Management List

The bible for Operations and a part of the syllabus in most of the IIMs, The Goal uses a fictional story to help you understand the core concepts of operations and systems management. The author Eli Goldratt has used the same concepts to write a few more books to cover the entire domain of operations; the last book in the list below covers Project Management. Read him and you will not have imagined Operations can be taught in such an engaging and insightful manner — The Goal, The Goal-2 and Critical Chain – A Business Novel



The HR List

Work Rules: Insights from Inside Google That Will Transform How You Live and Lead by Laszlo Bock, **Kingdomality: An Ingenious New Way to Triumph in Management** by Sheldon Bowles and Richard & Susan Silvano and **Thinking, Fast and Slow** by Daniel Kahneman & Amos Tversky (*if you really read this book well, you will understand why you tend to make silly mistakes on most problems and why more often than not you are unable to find unorthodox solutions that seem so obvious to a few others*)



Read to get better, read with a target

The first thing to do is to approach these books with the right mindset. Do not read to

- **use information from these to build answers in your interviews; that can be the most stupid thing you can do since you will be showing the panel that you are doing what the Indian system has taught you to do — memorize & regurgitate**

- show off that reading is your hobby; if it is you should already have a list of favorite authors and books (that hopefully does include a certain Mr.Bhagat and his creations)
Treat these books as stepping-stones to learning more about the vast world of business management.

Do not look only at books that deal with your specialization because if you want to be a business leader you can't just be Finance guy or a Marketing guy, you need to be curious to learn about everything that contributes to building a great organization.

The ones among you who should read all of this at any cost are those who one year from now when facing interviewers asking you — Why MBA — are ready to say — *I want to start my own firm in the future.*

These books will cost you, some a little and some a bit more but think about how much you spend on watching a stupid movie or an evening out with friends. If you have your priorities right, you will find a way to acquire and read them even it means making a few sacrifices on other fronts.

A good target to set will be to choose 12 out these 15 and finish them before June 2018 — the month you should be starting your MBA.

And before you sigh thinking I don't have the time for this or I wish I had the time for this — no one has time and you will rarely have more time than you have today until you retire.

Look at your day, look at the apps on your phone, look at your browsing tendencies. Whenever you make a choice to do one thing with your time, you are not doing something else with it.

Your current consumption of entertainment might seem much more interesting than this reading list but that is not very different from eating potato chips — absolutely irresistible to eat but absolutely useless for your health.

So time to weed out the potato chips you are feeding your mind and feed it something that is aligned with your long-term goals. But there is an exception to every rule, in this case, the upcoming season of *Game of Thrones* :-).

How to prepare for CAT – I

We are slowly getting closer to the business end of the CAT 2018 season. Some of you would have joined for classroom programs as early as last June, a lot of you in Jan and I am sure a few are yet to start but all of you know that you have to start your prep with all seriousness. All of you know that it is time to do more than just attend classes, meet your CAT prep mates and go back home.

So it is not a surprise that I am getting a lot of queries

- how many hours of prep should I be putting in daily to crack CAT 2018?
- what should I be doing on a daily basis to crack CAT 2018?
- how should I plan my prep for CAT 2018?

This post is going to be dedicated to all things related to a prep plan for CAT 2018.

Firstly, define what cracking CAT exactly means?

Cracking the CAT means getting calls from the IIMs and other top schools. What are the score criteria for getting calls from the premier b-schools in the country? We will deal with the other criteria in a different set of posts but let us look at what they expect in terms of CAT performance?

The first hurdle you have to clear is not the overall percentile. Your overall percentile does not matter if you do not clear the sectional cut-offs. There are aspirants who got close to a 99 percentile but still did not get any calls since they scored below 80 in one of the sections.

The first benchmark is to cross 80 percentile and above in each of the three sections VA-RC, DI-LR and QA.

You need to start your prep with this first goal in mind — clearing all sectional cutoffs.

Your prep plan should help you clear all the sectional cutoffs, not just the Quant

What was the structure/pattern of CAT 2017?

VA-RC: 34 questions | DI-LR: 32 questions | QA: 34 questions

The set-based questions — RC, DI & LR — accounted for, $24 + 32 = 56$ questions, or 56% of the test. Unfortunately, the same proportion is not witnessed in prep-time invested by the student.

Most students feel that

- there is nothing much to learn in DI
- LR is anyway about puzzles and logic so there is nothing much one can do in the way of prep

- RC is boring and whatever I do I always get caught between two options
 - VA does not need much of practice, I am good at Jumbled paragraphs
Given this line of thought, all of their prep time goes into Quant solving
 - prep material from more than one player
 - Arun Sharma
 - crazily tough remainder theorem problems
 - consistently ignoring the one Quant area they hate
- Another thing that test-takers keep saying is that once they start solving Quant they just keep going at it for a long time. What will be the outcome of such a lopsided prep plan?

An overall percentile that is not really high since the sectionals are low.

The amount of time you prep for should be aligned to the test structure and nothing else. Hence, every hour you spend on Quant should be matched with an hour of practice on the set-based questions DI-LR-RC together.

Mastering a skill takes more time than learning a concept

The reason why people keep spending so much time on Quant is that there seems to be so much knowledge to be gained when compared to DI-LR-RC, something that cannot be argued against, but DI-LR-RC is a pure skill. And like any skill, you will need time before you master it well enough to be in top 20% of the people.

Once you have learnt the basics of driving a car do you automatically become capable of driving in the most extreme of conditions. You need to drive many a mile in many conditions before you become a master driver. The same thing applies to any skill and DI-LR-RC is no different.

So the first step in your prep plan?

- Solve at the least 2-2-2 sets each of DI-LR-RC with a time-limit of
 -
 - 45 minutes in total, taking 6-8 minutes a set (on average) if you are starting with Level 1
 - 55 minutes in total, taking 9-10 minutes per set (on average) if you are solving Level 2
 - 65 minutes in total, taking 10-12 minutes per set (on average) if you are solving Level 3
 - If on any day you have lesser time than usual do 1-1-1 set each.
 - On weekends solve 3 sets each for 90 minutes
-

Where can I get really tough DI-LR sets for practice?

Given the difficulty of CAT 2017's DI-LR section, a lot of aspirants are looking for a book that has tough DI-LR sets.

Certain DI-LR sets are tougher than others because they are unique. They are not based on set patterns and you need to devote a bit more time to understand them first and then to solve them. So even if you practice a lot of tough DI-LRs the time you take to solve might not come down drastically.

Rather, what you should develop is the ability to solve the Easy & Medium sets really fast. During practice, you should not be content solving Medium sets easily and then think that what you really need is tough sets.

If you are doing an Easy set comfortably in 10 minutes in cruise mode it will not suffice. You should be slicing open the set in 5 minutes flat — that is true expertise.

On test day it is this ability that will give you the extra cushion to tackle the tough set and reach a much higher percentile.

Get the technique right before you start practising

Before you set off on your practice sets, just ensure that you get the technique right for both RC and DI.

If you have not yet done the basics from the IMS BRMs (or study material of other players) for DI and LR then do that first. If you have finished them or are above 80 percentile in each section based on your previous attempt then revise technique from the following sources:

- DI
 - <https://cat100percentile.com/tag/di/>
 - RC
 - <https://thecatwriter.com/2015/11/16/how-to-increase-your-va-rc-score-on-cat-2015-part-1/>
 - <https://thecatwriter.com/2015/11/17/how-to-increase-your-score-on-the-va-rc-section-of-cat-2015-part-2/>
 - LR
 - <https://cat100percentile.com/tag/puzzles/>
-

Preparing for the Quant section of CAT

If we divide the Quant topics into five areas — *Numbers, Arithmetic, Algebra, Geometry & Modern Math* — and the levels of difficulty of practice problems across

these areas into **Easy, Medium & Difficult**, then the typical practice sequence for most test-takers would look like the figure below.

AREA	EASY	MEDIUM	DIFFICULT
Numbers	→	→	→
Arithmetic	→	→	→
Algebra	→	→	→
Geometry	→	→	→
Modern Math	→	→	→

The problem with this sequence is that you are stuck for too long in one area and by the time you finish the basic of all topics, you will have finished quite a few Mocks without seeing great results.

Also, after you finish a couple of areas you would have forgotten everything you did in the first one since you did it quite a while back.

So a better sequence to prep would resemble the figure below

AREA	EASY	MEDIUM	DIFFICULT
Numbers			
Arithmetic			
Algebra			
Geometry			
Modern Math	↓	↓	↓

This ensures that you complete the basics of all topics at the earliest. This means that you will be able to solve the easiest questions from all areas from the earliest part of the SimCAT season. It will also ensure that you are not out of touch with a topic for too long.

Even on test-day, this is exactly how you should approach the Quant section — pick out the easiest questions first (irrespective of the area) since they will yield three marks in the least time and then move on to medium questions, solving difficult questions only if you have time left.

CAT rewards all-rounders, not specialists

One of the reasons why few people clear CAT on their first attempt is that they do not understand the most important rule — CAT rewards all-rounders, people who are good at all five areas QA, DI, VA, LR, RC.

But what does GOOD mean?

You will be happy starting with any of the five areas, will be able to solve Easy and Medium questions in them and side-step the difficult ones.

Given the hangover of Engineering exams, test-takers tend to play the percentages

- managing DI-LR cut-offs on Mocks by maximising LR and not really developing any DI muscle
- relying a lot on VA to counter the weakness in RC or vice-versa
- ignoring areas such as Arithmetic on Quant since it involves a lot of reading and focussing more on Numbers

The problem with this is that the test can easily catch you out in the deep.

- Last year's LR sets were quite tough and DI would have definitely offered a much better ROTI (Return-On-Time-Invested) whereas the LR sets were time-sinks
 - RC accounted for 24 questions and they were not really hard so acing the Verbal section would have meant being good at both VA and RC and not one of the two
 - Quant was also pretty easy and solving more than 30 questions was not really tough provided you covered basics across areas and not ignored any area since one of two questions here and there would have made a huge difference in cut-offs
-

How much time do you need to practice every day to crack CAT

Instead of trying to answer this question I will try to set milestones for the prep.

- **30-June 100 sets each of DI, RC and LR**
 - **Complete basics of all topics in Quant along with Level 1 or Easy questions practice (partially complete Level 1 is also fine)**
 - **30 questions of each VA question type**
 - **31-August 180 Sets each of DI, RC and LR**
 - **Complete Level 1 and Level 2 questions across all topics**
 - **100 questions of each VA question type**
 - **31- October 250 Sets each of DI, RC and LR**
 - **Finish previous CAT papers**
 - **Complete Level 3 questions on all topics**
- I am not going to answer how many hours are required per day. As potential managers, you have to manage your time to reach these milestones.**

The prep plan I have outlined above will ensure that your prep is balanced and you develop all-around capabilities. You can tweak it and change it as you wish but ensure that you keep the goal in mind — becoming equally good at all the five areas, good enough to ensure that you clear the sectional cut-offs irrespective of the type of paper CAT 2018 throws at you.

How to prepare for CAT – II

In the first part of the post on to [how to prepare for CAT](#), we discussed what your practice routines should be like. In this part, we look at how you should approach your practice, how you can get most out of your practice sessions and how you can maximize your potential in fewer iterations.

Your practice should be both *quantitative* and qualitative

In the previous post we discussed the milestones you need to reach in terms of numbers before various dates. But does that mean that you start today and just keep churning out the numbers?

What happens between practice sessions? Especially, right at the beginning of your prep. Do you pause to reflect on how well you have executed a practice session?

- Did you solve that DI set cleanly without any wasted steps?
- Could you have cut down on calculating precisely and instead approximated?
- Are you, as a process, always looking to exploit the gap between answer options?
- Are you reading the logic of the RC answer option or are you just matching words and phrases?
- Do you tend to re-start LR sets after realizing mid-way that you were barking up the wrong tree in your first representation of the data?

Very often test-takers don't approach their practice with such a mindset, aspirants almost end up doing the same thing over and over again without giving too much thought to their practice sessions.

If you want to improve from session to session you need to reflect between sessions and before you start your next session you need to tell yourself the things you are going to correct.

This is the best way to ensure that you are maximizing your ability in minimum iterations.

Starting your prep with a clean slate and doing it the right way

Practice is only execution but before practice lies the centre or core from which the way you learn stems, the way you perceive your ability stems. You need to first ensure that this core is based on the right principles.

Two things that all test-takers should take to heart are

- that it does not matter what your history with Math, DI, LR or RC is what you did so far has no bearing on how you will do on the CAT
- that it is not a matter of talent but a matter of maximizing your potential
So before you start your prep in all earnest you will do well to go through these two posts so that you make the most of your practice:

CAT Preparation: Changing The Default Settings

Every year a lot of young men and women toil away at this thing called CAT preparation. The most sincere and determined ones, come in full of energy and enthusiasm to do whatever it takes to ace this test and get into the hallowed portals of an IIM.

But do they come in with a blank mind ready to understand what this test is all about and attune themselves to it? The answer as we all know is, NO.

A CAT aspirant beginning his prep will be at the least 20 years old, long enough to start the test with a sizeable psychological baggage — a mental make up that stems from one's experiences and successes with education & tests throughout school & college. The baggage usually falls into two categories.

The first with respect to one's ability:

- I am good at Math since I have got good marks throughout school
 - I hate Math, I can never get my head around it
 - My English should be pretty good, I can speak the language fairly well
 - I am hard-working and sincere but I am not really sure if I am smart enough
 - I come from a vernacular background, so English is anyways going to be an uphill battle
 - I have never really been smart the way my friend/brother/sister is
- The second is with respect to the reflex response when faced with a problem:**

- Duplicating information onto paper as you read a question
- Trying to solve the question incrementally as you progress reading
- Trying to recollect the formula or the pattern or a similar problem you have done before
Well, whether your judgement about your ability is correct or faulty is besides the point. It is set against a background that has nothing to do with CAT.

Firstly, throughout school and college, we have primarily been tested on one thing — knowledge, which in turn translates into a test of memory. So being good or bad at school and college Math may not be a good indicator of your ability to crack CAT Math.

Secondly, have we ever been taught to *solve* problems at school? We are taught concepts, a bunch of formulas and solutions to the problem. Has anyone ever taught us how to approach *problem-solving* irrespective of the area to which the problem belongs and the concept that it tests? Not really.

For the better part of our school life, we are not taught this.

And the CAT if anything is unlike anything you have done in school in terms of what it demands.

What Is APTITUDE?

The dictionary meaning of the word *aptitude* can be captured by many words. But the words closest in the way it applies to CAT and other tests such as the GMAT and GRE, are *competence, skill & ability*.

If you really understand this aspect of it you will realize that *knowledge* ends up taking a back seat since the competence they are testing is not *memory*!

What they are testing are your reasoning skills in different contexts — Quantitative, Data, Logical and Verbal.

How does one learn a skill? Or rather what is the building block for any skill or competence? TECHNIQUE.

Any skill be it skipping, cycling, carpentry, stitching, drawing or singing, every skill is based on sound TECHNIQUE — a series of movements executed with accuracy and precision.

In the case of aptitude tests, these movements are mental.

The skill you have to develop is to solve problems, not plug numbers into formulas! To develop this competence you have to consistently follow the steps below.

Read the question once, read the question well

How many times during SimCAT analysis have you found that you could have scored at least 20-30 marks more had you avoided silly mistakes? How many of these mistakes are because of not reading the question properly?

The answer to both questions will be “often” for test-takers stuck in the 70-85 percentile range.

The first and foremost thing that anyone trying to crack an aptitude test has to learn is to read the question well. To do this, you have to get rid of all your reflex responses:

- Duplicating information on to the paper as you read a question
- You do not need to write since the information is already there in case you need to refer
- Copying the information is not taking you closer to the solution
- Writing is not thinking

- Trying to solve the question incrementally as you progress reading
 - You never know what is being asked till you reach the end of the problem
 - You start solving as you are reading and then do not read the last part properly, resulting in silly mistakes – LOWER ACCURACY
 - You realize you are not getting anywhere and re-read the problem – LOWER SPEED
 - Trying to recollect the formula or the pattern or a similar problem you have done before
 - You are not reacting to the question in front of you but to a question from memory
 - You fail to see the small twist in the tale
 - You get another answer, which will be there in the options, and move on thinking you have got it right – LOWER ACCURACY
- This initial part is probably the most crucial part of problem-solving.**

They are similar to the initial movements of a batsman. The best batsmen in the world, watch the ball, pick up the length and take a clear decisive step forward or back. Reading the question once and reading it well is nothing but keeping the head still and watching the ball and taking a decisive step towards playing it.

How well the shot is executed completely rests on this initial movement. Those who remember the early days of watching Sachin play, would recollect the way Gavaskar used to gush about him – look at the balance, look at the head position, look at how straight the bat comes down. It's all about technique.

So the first step is to change your default settings, your reflex response in terms of reading the question.

Do not be on autopilot, solve the question in front of you

Remember you need to think about a new problem in front of you, not reproduce an old one

You need to actively process the information in a problem.

You are not solving a stereotype.

CAT is not R.S.Agarwal. R.S Agarwal is the worst thing that you can do to your aptitude prep.

You end up looking for a type rather than solving the unique question in front of you.

You also end up developing the habit of trying to remember every new question as a type rather than learn an approach.

You end up collecting fish instead of learning to fish.

Let us take the example of a problem (we gave this as homework as part of the *Familiarity Breeds Attempts* sheet in the *Last Mile To CAT* workshop) to understand this better.

A box contains 6 books on Mathematics, 8 books on Economics, 5 books on History, 4 books on Philosophy and 7 books on Politics. What is the minimum number of books one should take out of the box to ensure that at least one book on each of the five subjects has been picked up?

1. 27
2. 5
3. 23
4. 29.

The moment they read this test-takers who have been preparing for a while quickly jump to the solution by identifying the type. This is the *adding-everything-but-one-subject and then adding a one at the end* type. So we need to add $4+5+6+7$ plus 1 = 23. But is it really that type?

This question is similar to the pair of socks question –

If there are 12 different pairs of socks, all mixed up in a bag, what is the minimum number of socks one should take out to ensure that you have at least one matching pair?

The key word is *to ensure*, that means whatever happens after this you will have a pair. So one looks at the worst case scenario that every time one picks out one, it is from a different pair.

So in this way, one can pick up 12 socks, each from a different pair.

The 13th one, when picked up, will definitely form a pair with one of the 12 ones picked previously. So, in this case, the answer is 13.

What you need to remember is the approach and not the type! We looked for the worst case scenario with the socks, even here we need to look at the worst case scenario.

The worst case scenario is when we end up picking maximum books from the same subject before moving on to another subject.

Which subject has the maximum books? Economics with 8.

So we should be starting with that subject and then move on to the next subject with the maximum number of books. So the solution is $8+7+6+5$ plus 1 = 27.

This example, illustrates the common reason for silly mistakes and low accuracy, the tendency to replicate an old problem rather than adapt the approach to a new problem.

The only way to avoid this is to remember that you are not supposed to be on autopilot but actively solving new problems every second of the 3 hours of test-taking.

This part is similar to the playing of the shot well – play it close to the body, play it right under your eyes.

Your brain is still plastic, you can still make major improvements

More than all of these, the most important thing to believe is that you can still learn and get better. Sure there were kids at school or in your family who seem to be naturally better at these things but that does not mean that you cannot learn these things.

Different people are good different things naturally, that does not mean that they can only do those things. We can learn to get better.

The brain is relatively plastic till age 30. It is only after that it starts hardening and it becomes tougher to learn new things. This is one of the reasons why we find that our parents are sometimes resistant to change and reluctant to pick up new things. At the same time, we find children attending multiple classes at the same time – music, sports and what not – without much difficulty picking up stuff.

So most of you can still very easily improve upon your current levels, provided you are willing to believe that you can learn, provided you are willing to change your default settings.

Through this blog we will focus on developing the right approach, adopting the right test-taking strategy, keeping abreast of relevant current affairs and maintaining the motivation to succeed.

So keeping tuning in to keep getting better.

CAT Preparation: The Natural Talent Myth

In the [previous post](#), we discussed the various kinds of baggage that people carry around in their heads about their abilities. The heaviest of this is the one that people have about natural talent or rather the importance that people attribute to it. All of us would have a cousin or a friend or a classmate who could always achieve the same or better result with lesser effort. In fact, my best friend, whom I met during CAT Prep (CAT GD-PI actually) – was one of this sort.

During my stint at the IIM and during the course of my professional life I have met a few of those individuals whose abilities fall in the *outlier* category; people who are in a different category as far as pure aptitude goes.

But the key thing is this – there are only a few of them! The rest of the people at elite institutions and major corporations are people who have had to work hard to get there, people who are highly competitive, people who make the most of what they have.

All things cannot come naturally

One of the things that we need to realize is that all people have a natural ability only for some things, not all things — great problems solvers need not naturally be great communicators, great team players need not naturally be great strategic thinkers, great analysts might not be natural leaders and so on.

Everyone comes with some default settings which makes them good at a few things, at the rest we have to work hard to get better. How does one work hard to get better?

Well, the first thing that we have to acknowledge is that we might not like the things we are not naturally good at. For example, despite having pretty good logical reasoning skills, I have never ever touched programming or anything remotely related to software coding with a barge pole. Why? I simply did not like it!

The same applied to my dislike for certain topics during my CAT preparation — numbers, remainders, functions, graphs, modulus and some parts of algebra like the number of solutions to equations.

The question is what came first — my dislike for them or the fact that I did not think I was naturally good at them? I think it was my dislike for them that lead to me not even making the slightest effort to understand them. I always thought I will work my way around them. But that, as I realized in my first and unsuccessful CAT attempt, does not happen.

The thing about training to get better at anything is to conquer your weaknesses, to get better at things that do not come naturally to you.

Creating new pathways in the brain

When we approach something that we have always hated with all of our heart, like say *Geometry*, we are meeting a huge barrier that we have erected for ourselves. So the first thing is to remove that imaginary barrier. Approach it not as a pain that you have to deal with but as something that you want to get better at. It is as good as learning a new language.

Most of you are only in your twenties so your brain still has enough plasticity to absorb new things. When you are learning something absolutely new you will be creating new pathways in your brain. You are going to use it in ways you have not used it before, in ways that do not come naturally to you.

So you would need to understand that you need to approach this with as blank as a slate as possible and genuinely try to learn something.

This is possibly the most important thing, to genuinely want to learn to get better — looking at vocabulary building not as words to be painfully mugged up but as things that make up world as much as numbers do, looking at building your vocabulary as a way to become more *articulate* (*the ability to express oneself with precision and*

effectiveness; knowing the meaning of the word *articulate* itself is the first step towards becoming articulate).

We often find some old people absolutely unwilling to learn new things, especially with respect to technology, as long as someone else is there to do it for them. Once they have no option, they somehow manage to learn and end up liking it as well. At the same time, there are other oldies who are always keen to learn and pick up new things and have no trouble.

The biggest barrier between you and something new the baggage you place between the two.

Those to whom things come easily

I have always found sport, especially cricket, a great *metaphor* to put many things in perspective given our national obsession for the game (but somehow I sense that since Sachin left we no longer really love cricket, we follow it but our heart is elsewhere). One interesting story that I often recount is of going to watch India play England at the Wankhede in 2006. We went to watch just the last day's play, India needed 300 runs to win and had 10 wickets in hand. On the way to the stadium my friend I and scripted how we wanted the day's play to unfold — 300 to win was tight but then all we needed a good start from Sehwag and then for the rest to take the team to victory, preferably Sachin.

We reached well before the start and got a chance to watch the players warm up and do some light practice.

First Sehwag came out to warm up — dressed in shorts and t-shirt he was practicing his shots against a young kid throwing down a tennis ball from 11 yards; all in all, it seemed as if he was having a good time and fooling around.

Then came Rahul Dravid — dressed in shorts, t-shirt, thigh guard, arm guard, and helmet, everything he would have on when he is on the field. He was also practicing shots against the same young kid throwing down a tennis ball from 11 yards!

This small episode possibly throws more light on the reason behind the longevity of Rahul Dravid's career, his ability to adapt to different formats & different roles in the team and his standout successes on foreign soil.

Dravid was never called *gifted* or *talented* or all those adjectives that used to describe those to whom things come easily, players like Sehwag or Rohit Sharma. These guys very rarely reach the top and stay there for a long time. Dravid was I think rightly called The Wall — built brick by brick with patience and effort.

If you look at the biggest achievers, the players who top the record books, it will usually be players who really maximized their ability — Dravid, Kallis, Sangakkara, Border, Gavaskar — and players who were not just supremely talented but intensely competitive — Sachin, Lara, Ponting, Warne.

As the quote by Uchimura in the image at the top of this post says, natural talent is overrated, it is how you approach your preparation that matters.

So set aside all preconceived notions you have about your ability. Prepare not to feel good but to get better. Prepare to get better at topics that do not come naturally to you. Prepare with a view to really learn new things than to get better at doing the same old things.

For those of you who are wondering what happened in that match, you can find it [here](#); about what happened after the match started, the lesser said the better.

All the best.

How to prepare for a CAT retake – Part I

Most of the institutes have given out their calls and many of you might be planning to retake the CAT. For some of you, it might be a case of almost getting there but missing out because of one poor section or just missing out on the overall percentile. For others, the CAT-day might have been a bad day at the office and you knew straight away that nothing much was going to happen. On my first attempt, I fell into the latter group — I knew I was out of my depth when I saw the Quant paper, there was no way I was going to clear the cut-offs. This despite consistently doing very well in the Sims leading up to the test. I decided to take another shot since I was very clear that it was not out of my league.

This post, in three parts, is for all those re-takers who are NOT hoping to get lucky next time around but want to ensure that they leave no stone unturned to make the cut in their next shot at CAT.

Do not use percentiles to evaluate your ability on a section

One of the ways by which test-takers evaluate their performance on a section is by looking at their percentile on the same. They rate their ability on a section depending upon what percentile they scored in that section. The CAT is a very non-standardised with question types and level of difficulty varies wildly from year to year. If we evaluate CAT-16 with respect to CAT-15 there were significant changes

- The RC passages and other content on the Verbal were a lot a tad tougher than those on CAT-15
- The Quant section was definitely trickier than CAT-15, making speed & accuracy less of a factor than it was on CAT-15
- The Quant on CAT-17 was easier than the one on CAT-16

If you got a 90 this year on Verbal & Quant and lost on DI-LR, which was as tough as it was in the previous year, then can you rest assured that your VA & QA are strong and you will need very little prep?

What if next year, the RC passages next year go up a few notches to the 2014 level? What will you do if the Quant section poses trickier problems and LR becomes easy? This has happened to quite a few students in the past, percentiles getting reversed in the second attempt.

Nothing can be more dangerous than evaluating your ability solely on the basis of your percentile when planning a re-attempt! This is especially true when your sectional percentiles are in the 80-95 range!

Only those with percentile above 98 on a section can rest assured that their ability on a particular section is pretty solid.

Evaluate the quantum of effort you put into preparing for each area

Instead of evaluating your ability solely on the basis of your percentile, evaluate it based on the amount of effort you put into the particular area. When I started preparing for the CAT for the first time my core strengths were VA-RC and DI-LR, QA (relative to my ability on the others) my weakest area. In my prep for my first go at the CAT, apart from classroom sessions, I did the following

- **VA-RC:** Solved the entire material of two brands including IMS, covering RC, Vocabulary (including foreign phrases and the book by Normal Lewis) and Verbal Reasoning; the only area I excluded was Grammar
- **DI-LR:** Solved the entire material of two brands including IMS
- **QA:** Solved only material pertaining to Arithmetic, Algebra and Geometry completely excluded Numbers and Modern Maths (I hated them :-))
- **Tests:** I would have taken about 50-60 full-length tests in total!

Malcolm Gladwell has famously put a number to the number of hours of training put in by those who become high-achievers in their field — 10000 hours of deliberate practice. There has been a lot of debate around this number that seemed to suggest that all you needed to do was deliberate practice and you would succeed. But be that as it may we know that the best sportsmen are the ones who put in more than the others into their practice — it was true of Michael Jordan, it was true of Sachin Tendulkar, it is true of Sardara Singh (one of India's and the world's best hockey players).

So the first step is to start with an honest evaluation how much practice you put into each of the areas — RC, Vocabulary, Reasoning, Grammar, DI, LR, Numbers, Arithmetic, Algebra, & Modern Maths.

Do not prep by percentages, prep to increase the range of your abilities

While I enjoy teaching a lot there are times when some questions from students really get my goat, especially this one — Sir which topics are most important for CAT? We are so used to guide-book preparation for the better part of our lives that we cannot think of an approach beyond it. I have no problem with this but then one should not aim to get into elite institutions and secure high-quality jobs by playing the percentages.

Firstly, you will be taking not just the CAT, but other tests such as the XAT, IIFT, NMAT and SNAP. Across these five tests, your ability across all areas will get tested to various degrees.

More importantly do not look at it through the narrow lens of test-prep. Ask yourself the following questions

- **Will possessing a good vocabulary not be of any use in your life (I know Dhirubhai Ambani would not have had a great vocab, but then he did not do an MBA either :-))?**

- Will the ability to quickly read and process content in English, be it articles from the Economist or the latest management books not come in handy?
- Is the ability to quickly crunch numbers irrelevant just because you have a calculator on your phone?

Until you are looking at all of these things in terms of weightage on CAT and view areas as things to be endured to get into a great institute, you will always be a resource who will be used by others.

The day you start looking at these things as core skills are necessary to succeed in life and thus expected of any high-quality individual, then you start becoming — to paraphrase Marlon Brando from *On The Waterfront* — a contender, a contender for taking up leadership roles.

Make a list of the skills you want to acquire, the areas you want to master

Not getting through is dispiriting, to say the least, more so when after you have put in a lot of effort, it was no different with me. I thought I had the QA section covered since I was comfortable with *Arithmetic, Algebra & Geometry*. I was not playing the percentages but something about topics such

as *Functions, Probability, Inequalities, Numbers* made me averse to trying them. One mentor who otherwise was really helpful in showing us the best way to solve DI and Arithmetic questions told me that there will be enough questions from my favourite three areas, on the test day it turned out the other way.

Before my second attempt I asked myself some really hard questions — why did I shy away from $f(x)$ questions, is probability that tough to understand, am I selectively intelligent and specifically dumb?

One big reason behind my reluctance to tackle these questions was the fact that these topics were not really covered extensively in the ICSE syllabus of that time. So the first barrier was a certain unfamiliarity.

The second and more important reason was that I made no attempt to understand them and get comfortable with them — they were black boxes and I let them remain black boxes. When I cleared the cut-offs in the Sims leading up to the test, I never bothered to try to learn the solutions to questions I had ignored.

In my first attempt focussed more on getting better at what I knew rather than learning what I did not know and thus did not expand my range of scoring opportunities. So my single point agenda in the lead up to my second attempt was to focus on really getting the better of my pet hates.

Each one of you will have your own Achilles heel or heels (*An Achilles heel is a weakness in spite of overall strength, which can actually or potentially lead to downfall. While the mythological origin refers to a physical vulnerability, idiomatic references are to attributes or qualities that can lead to downfall are common*). Make a list of those things and you will find that the quantum of practice you put into your first attempt as far as those areas go was proportionally lesser than what you put in for your stronger areas.

The more detailed you make this list the better your prep will be — calculation DI, Venn Diagram LRs, Time Speed & Distance etc.

Learn to learn better not just for the CAT but for IIM Interviews as well
Most of the time I feel that the way we learn holds the key to how much we actually learn. Our focus has always been on memorizing and as a result while we might know a concept in terms of definition we rarely manage the application.

The students who made it to the WAT-GD-PI rounds are being peppered with math questions. As I am writing a student posted his MDI-Gurgaon PI experience on the What's App group and one of the questions he was asked was to solve $x^y + y^x = 999$. Other questions posed to other students across institutes include

- difference between *discrete* variable and *continuous* variable
- for what sort of data will you use *mean*, when will you use *median* and when will you use *mode*
- what is the square root of -1

What is really important is that you move away from learning to remember but learning to understand and thus remember once and for all.

For example in the simple equation $y = mx + c$, what are each of the terms? How is it related to $x/a + y/b = 1$ and $ax + by + c = 0$?

What happens to the curve $ax^2 + bx + c$ when a, b & c are changed?

The letters are not just alphabets but symbols used to represent logic. Try to get to the logic of things, this is the single biggest tool to improve your aptitude.

The same curiosity has to apply to Verbal as well — what is the difference between *disinterested*, *uninterested* and *indifferent* are all the three the same, are all three different or are two of the three similar?

Your entire prep has to have one motto — I am going to learn new skills and get better!

This is important to keep in mind since most people prepping for a retake do not focus on the quality of their prep. They go in with full enthusiasm, energy and drive with the motto — I am going to nail this test this time!

The problem with the second approach is that it is very energy intensive and somewhere leads to a burnout. To a certain extent the difference between Federer's game and Nadal's game.

You will end up over-preparing, not really get better in terms of your aptitude and ability to handle questions from a wide variety of areas but only get better in terms speed.

Also the big danger with such an approach is that for some inexplicable reason you can come unstuck on D-Day! I have learnt this the hard way since it has happened to me

once during an engineering exam on my favourite subject. I believe it happened because I enjoyed the prep so much I went overboard with it.

I wanted this first post to be primarily about the approach and mindset that you should build for your next attempt. Without the right approach and mindset most efforts are misdirected.

In the next post I will deal with the specifics about what content to use to practice for each of the areas and how to plan your prep for the retake.

How to prepare for a CAT retake – Part II

In the [previous post](#), we discussed the mindset with which one should approach a CAT retake; in this post we shall look at a few more aspects with respect to a successful CAT retake. Since each one of you readers will have a different back story with respect to your first attempt and there will also be some non-IMS students among you as well, the focus of this post will be a bit wider.

To take up classroom coaching or not

The first voluntary disclosure from my side is that I took up classroom coaching for my first attempt. I attended classes regularly but I would put my regularity more down to the fact that I liked spending half an hour after classes chatting with a couple of my fellow aspirants who are till date my closest friends. Another added factor is that I was not working and distances in a small city like Visakhapatnam were barely a hindrance.

In recent times though there is a discernible trend given the distances in metros, in some cases the work schedule and in others the perception about the level of difficulty of the CAT, towards self-preparation.

Well, firstly I feel that unless you have scored well in excess of 95 percentile and have taken classroom coaching (and attended sessions regularly) some form of classroom coaching will always be helpful. It need not be a full-length program, you can choose the duration depending on your aptitude and how much effort you put into your first attempt. Here are a few reasons why:

There is nothing like a well-designed class sheet to learn from

CAT 2017 year was my 13th CAT and my colleague J at <http://www.cat100percentile.com> has taken it 3-4 times more than me if I am not wrong, as some of you would know has eight 100-percentiles to his credit and has been teaching for more than a decade now. So when we designed the class sheets together along with a few others, we were looking at not just the CAT of the last few years but at the very nature and essence of the test as it has filtered through the various avatars it has taken over the years.

A well-structured program with well-designed class sheets will relieve you of the headache of having to scour various sources to design a comprehensive program for yourself.

If you know how to solve all the problems in the IMS class-sheets that you will be given, you will have covered all the concepts and patterns that you will need to learn to ace the test.

A good teacher always brings something new to the table

While there are enough books with concepts, questions and shortcuts there is always something unique that a good teacher brings to the table. Whenever I discuss a problem with my fellow teachers, I always find that each of us takes a very different approach to the problem and it is not always the same one who comes up with the best method.

One huge baggage that we carry is the traditional long-form of problem-solving. Written content because of its very nature ends up using the long notational method whereas the spoken way of solving can use logic. So one of the ways of going beyond your usual default-settings in terms of approaching and solving a problem is to learn from others.

I remember how during the time I was preparing I looked at the way my teacher solved the problem and I thought — I want to be able to do it like him. It did not matter that I too had got the answer (in almost the same or slightly longer time) I found that his method was more efficient, more elegant.

This is not to say that all teachers everywhere are like this but there will always be something that a good teacher can show you.

There is a lot you can learn from a good peer

It is always great to have a good peer or peer group for your prep. I know the same is available online through various forums and social media groups but isn't it better to have someone to immediately in person to discuss the doubts you have while solving a particular question that is part of the same syllabus that both of you are following?

Also, I have found that at times some students come up with better ways of solving questions than the instructors. I used to observe the guy who always used to top the tests during our prep and silently determining to solve questions the way he used to with minimal writing.

Online resources — Commentary is not coaching!

Things have changed a lot since the days of my prep and one of the biggest changes has been the emergence of forums such as PG and communities on FB. While they are necessary — a great way to gather information, share content and build a peer network — they are by no means sufficient.

It is important to note that what forums offer is similar to commentary — the people doing it might be ones with credibility and their advice and observations genuine but can a batsman going through lean patch only listen to commentary and get better? Do they not usually work with specific batting coaches and bowling coaches to fix their game?

During the SimCAT season (and otherwise) I spend a lot of time meeting students in the evening. When a students come to me and say that their scores are not going up and they have done this and that, I usually throw them a problem and see how

they approach it – do they have a problem with concepts, are they reading the question properly, do they have a tendency to make silly mistakes, if yes, what is the source of the same.

Most of the time each student has different skill sets and different problem areas – it is both a question of kind and of degree. It is equivalent to watching a batsman in the nets and observing where the bat is coming down from, the way the feet are moving, the way the head is positioned.

So relying purely on online forums is in my view something that will not help you maximise your score. While a peer can help you to a good percentile, a mentor who knows the CAT inside out can take you to your best percentile.

I hope all IMS classrooms students are aware that they are entitled to free repeat classroom coaching!

The quality of your practice material is as important as your practice

Given the plethora of free options abounding on the internet, a lot of students easily fall into the trap of accumulating all the free content they can get their hands on to. While the tendency is understandable, it is something that should be strictly avoided. Having worked at and headed the IMS Academics Dept. I more than know what a good question is and what goes into the making of a good question.

A small anecdote just to throw light on the art of question making. When entrants to the Academics team were given a question-making assignment, they usually tried to impress those of us who were already there, by trying to make a really, really complicated question. They tried to fit two or three concepts into one question and introduce a trick as well; the effort usually ended up being clumsy (and sometimes very funny, I remember a colleague maintaining a word document of bloopers churned out by newcomers).

So when one such newcomer presented me with one such clumsy effort, my advice to him was to imagine himself beginning to train to be a chef. Would he on the first day itself try to make an elaborate *biryani* to showcase his skills. I told him that what he should be trying to make was a perfect *idli* with a perfect *chutney* (unlike in Chennai, in cities north of the Vindhya, it is really tough to find a good idli itself, a good chutney – no way!)

A good question need not necessarily have to be a tough question. A good question is one that is articulated into English without ambiguity in the simplest words and is designed to elegantly test the application of a particular concept. One of my favourite questions to demonstrate this is the GMAT question below.

If s and t are integers and $s/t=64.12$, which of the following could be the remainder when s is divided by t ?

- 2. 4
- 3. 8
- 4. 20
- 5. 45

It is deceptively simple. It tests the most basic of concepts and yet many good students stumble trying to get a handle on it.

Good questions cannot be rolled out of an assembly line just like that. Just like any other skill, the art of making questions is something that one learns from a mentor and perfects over a period of time. It goes without saying that brands that have been around for a while and hence have well-established academics teams are the ones that produce the best content.

As far as CAT Prep goes, the oldest players in the industry are the established classroom brands and not online brands and hence it makes sense to use content from any of the established classroom brands. It does not matter how convenient or how fancy the software is if the question is not reflective of CAT. (In fact, when it comes to the GMAT I do not even advise the use of any brand, Indian or international, except the official questions and tests released by the GMAC since I feel none of them replicates the nature of questions posed on the GMAT).

There are a couple of books such as the one by Arun Sharma that serve as a good supplement to your prep but for tests, you should stick to one of established classroom brands.

I wanted to focus on these two aspects since I feel that many students fall short of what could be their best percentile by 3-8 percentile points an agglomeration of material from various online sources. I am not against the use of the web and of technology. It is just that I genuinely believe in the impact a mentor can make and also place a great premium on the quality of content.

I am taking some time with these posts since we need not rush into an action plan. We can focus on the larger things and slowly drill down to the specifics.

In the next post I will deal with preparation strategies for the three sections and in the one after that I will take up profile-building.

How to prepare for a CAT retake – Part III

In the previous two posts we discussed the mindset and the tools that you would need for a successful retake. In this post we will take a look at the specific things you need to do for each section and area.

VERBAL Ability — Throw your prep net as wide as possible

Of all the things that make the CAT tough, it is nature of the VERBAL Ability section that poses the biggest challenge. At some level the way the CAT has tested VERBAL Ability over the years seems to filter out people whose VERBAL Ability is as much a function of their general proficiency with the English language and reading per se as much as it is a function of the amount of practice they have put in.

So in effect assured success on the VERBAL Ability will be a function of your natural ability with the language and your practice equipping you with the following knowledge & skills

- **an above average reading speed of 250-300 WPM**
- **a wide enough vocabulary of around 1500-2000 words**
- **ability to apply Grammar rules pertaining to written English**
- **logical reasoning in a verbal context**

While the CAT itself might not test all the above skills — Grammar questions, for example, did not feature in the last two editions of the CAT — between the other tests, XAT, IIFT, NMAT & SNAP, all of the skills above will get tested.

So the first thing when it comes to a CAT retake is to approach the prep with an attitude towards developing all the skill sets rather than a narrow focus to somehow clear the cut-off. The latter will only make your retake a matter of chance rather than a matter of competence.

So how do you develop each of these skills?

Reading Speed & Comprehension

The first thing to grasp is that reading speed is a *skill*, just as driving a car is or playing a sport is; like them it is function of a certain natural predisposition and a lot of time spent practicing.

While you can learn to drive a car in a short span of time, you will need to put in a lot of miles of driving under various conditions before you can drive at high speeds with a lot of control; the same applies to Reading Comprehension.

So there is no other way to master Reading Comprehension than by practicing a lot. What do I mean by a lot of practice?

You should finish the entire RC material of at least one of the test-prep players' study material. Once you are through with this you should practice the RCs from the GMAT Official Guide (soft copies of which you can find online); this is just practice.

Apart from this you need to dedicate some time every day for general reading that is geared not only towards increasing your reading speed and vocabulary but also your general knowledge required to clear the WAT-PI rounds. What qualifies as general reading and what are the kind of books you should read will be dealt with a follow-up post.

Vocabulary

The width and depth of your vocabulary can be a very good indicator of the width and depth of your knowledge. One of the strengths of good communicators is their ability to find the right words for the situation, in other words their articulation skills.

Very often I have found that despite knowing words, students need not always know the usual context in which the words are used. Take for instance the word "mediocre". While the dictionary meaning is *average*, it is usually used with a negative connotation. I have found many students using the word "mediocre" not with a negative connotation but with a neutral connotation, almost interchangeably with the word "medium".

This more than provides an explanation as to why many students find questions around style, tone & attitude of the author tough to handle.

The only way to learn words is to read them as part of a text and understand them in context. If someone is writing an editorial about the current government and calls its performance "mediocre", it means that he/she feels that it is below par or underwhelming. By reading the entire article you will be able to grasp this.

So what do you need to do develop a good vocabulary – read extensively and check meanings of unknown words as and when they appear. As mentioned earlier I will do a separate post on what is the requisite reading that you should be doing.

I finished two books during my CAT prep despite having a good vocabulary – Word Power Made Easy by Norman Lewis and All About Words by Morris Rosenbaum & Maxwell Nurnberg, the second one is at a slightly advanced level than the first. So it goes without saying that doing these books will not hurt you in the least. If you have a poor memory, just keep re-doing the books.

Grammar

Grammar questions are probably the least important in terms of weightage but knowledge of the rules of Grammar is something that will always come in handy when it comes to communication in a professional setting be it spoken or written. The only professionals from the sub-continent who can carry off poor English are cricketers from our neighbouring country :-)! Just today I came across a headline caption on the signup page of a new startup by IIM Alumni – *You are just one step away from being a Expert!* (the exclamation was not added by me!).

So finish the Grammar books from the Study Material you have and then practice Sentence Correction questions from the GMAT Official Guide.

For those of you who are reasonably good with the basic Grammar rules but want to avoid inadvertent errors and improve your written English, Eats, Shoots & Leaves by Lynne Truss will prove to be a humorously useful resource as will The Elements of Style by William Strunk Jr. & E.B. White

Verbal Reasoning

A lot of your ability on Verbal Reasoning will depend on how much you move from choosing options based on gut-feel to rejecting options based on logic.

The best resources will again be the entire material offered as part of the classroom program of established players. In addition Critical Reasoning questions from the GMAT OG will be a good supplement in terms of quantum of practice.

For those with good VERBAL Ability there is just one suggestion — start reading at a slightly faster speed than you do currently do even if it is uncomfortable, it will soon become your normal speed (not very different from working out).

DI & LR — Practice, Practice & more qualitative practice!

Like RC, DI-LR, which along with RC constituted more than half the paper in CAT 2017, is a section/area that tests a skill rather than knowledge and hence demands a lot of practice.

What is important though is that you not only solve enough sets but also evaluate the way you solved to weed out

- unnecessary calculations
- double solving and
- false starts

One of the ways of improving your ability on DI-LR is to solve good quality sets from

- previous years's Papers
- books such as CAT 500 and
- puzzles from [www.cat100percentile.com]

The thing with DI-LR is that all of us will be reasonably good at solving the standard question-types. The problem arises when the level is amped up a bit like it was on CAT 2017. What you need to do is to ensure that you genuinely understand the kind of logic that is tested on tougher sets.

All IMS classroom students will do well just to solve all LR sets from all the class sheets and workshops to get a good idea of the width of DI-LR tested . I am sure that there will be quite few sets that you would not have been able to crack in class and will find difficult to crack even now (despite having listened to the explanation).

The reason for this is that such sets require you to go beyond your default LR settings and you have not yet grasped the difference between such sets and the regular LR sets.

Thumb rule for DI-LR practice one set each per day apart from solving a Sudoku puzzle a day.

QUANTITATIVE Ability — What you dislike weakens you

As I discussed in the first post, what stand between your current QA percentile and a great QA percentile are the areas you do not like and hence have not solved too many questions from.

For those whose QA is weak, start from the area you hate the most, use proper study material that lists out concepts in detail(not just formulas) and solve enough practice questions to be able to solve questions fast.

For those whose QA is above average, there is no better resource than <http://www.cat100percentile.com>. Again, start from your weakest area and go through all the posts starting from the first one.

One of the things to keep in mind while learning from the cat100percentile site is that many a times you will think you have understood a concept, especially ones which are really new to you, but if you try to recollect it the next day you might draw a blank, this is most true in the case of slightly advanced concepts such as partitioning.

So always make it a point to revise what you have learnt the previous session. The idea is to ensure that you have genuinely understood whatever is posted.

Follow up your learning of the concepts from cat100percentile with practice from either the IMS Study Material and online practice drills incase you have not finished them or from any other material from an established source.

Creating an effective practice schedule

Your practice schedule should be aimed at developing competency across all areas and clearing the cut-offs for all three sections.

You should divide your whole prep into two phases:

- **March – June : Focus on learning and competence building**
- **July – November: Focus on speed and test-taking skills**

The table below provides an indicative way to schedule your daily practice sessions until June.

LEARNING AREA	DURATION	FREQUENCY				
General Reading	1h	Daily				
Vocabulary	30m	Alternate days				
Grammar	30m	Alternate days				
Quant	1h 30m	Daily				
Verbal Reasoning	45m	Alternate days				
DI-LR-RC 1*3	30m	Every day				
DI-LR-RC 2*3	1h	Alternate day				
DI-LR-RC 3*3	1h 30m	Once in three days				
Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
General Reading	General Reading	General Reading	General Reading	General Reading	General Reading	General Reading
Quant	Quant	Quant	Quant	Quant	Quant	
Vocabulary	Grammar	Verbal Reasoning	Vocabulary	Grammar	Verbal Reasoning	
DI-RC-LR	DI-RC-LR	DI-RC-LR	DI-RC-LR	DI-RC-LR	DI-RC-LR	

Depending upon the time you have you can solve 1-set each of DI-LR-RC or 2-sets each or 3-sets each.

Setting the right goals for a retake

What you want to do on a retake is to take your percentile to the next level. For this your ability needs to go to the next level. This means that you cannot afford to keep your learning needs very narrow.

For example, if a team really wants to move up the cricket rankings in ODIs or T20Is then it should look at all aspects of its game, right down to how good they are in the field. One of the reasons SA make it to the finals most tournaments is because they have always been an exceptional fielding unit.

All the books and all the methods outlined above are not new. Those who execute it will see a quantum jump in their competence across areas those who do not will end up leaving things to fate to throw them a paper conducive to their strengths.

You need to peak at the right time

This is something that is very often talked about in sport – peaking at the right time.

Those who watch sport regularly know that no individual or team performance is at the same level all the time. Within a tournament, we see that a team can start slowly but then manages to hit the peak form at the right time — Australia in the 2000 World Cup. Within a season, as is the case with leagues across sports, teams peak at different times — with Arsenal always peaking at the wrong time! Even across a career, a sportsman will have a purple patch where he/she can put no foot wrong — Djokovic in 2015 years or Virat of late.

What you need to do ensure is that you peak at the right time for CAT — September.

What usually happens on a retake is

- you start off full-steam in the March-July period and somehow lose energy or burnout as you get closer to the test
- you decide to go underground till June-July and then straightaway try to go into an intense prep mode

Both are deeply flawed methods. While your practice should start from March and go all the way through to January for XAT, the intensity and focus should vary across the months.

Till June: Be in LEARNING mode

From the March-June period, you need to only be in the learning mode. You do not need to be pumped up and thinking things like *this time I'll won't just crack the test but smash it to smithereens!* You just need to ensure you are being regular in your prep and enjoy the learning process. This should be a happy phase with very little anxiety. Think about this phase as net practice — one is working on learning to get better.

My friend once saw Virat practice in the nets in Australia — 30 mins of just playing bouncers!

July-November: Be in TESTING mode

Right from the first test onwards you need to be in game mode. This means that you need to be kicking yourself over silly mistakes, working to cut-down on the wrong choice of questions and focusing on improving test performance. This will only be possible if you have already covered the learning needs before July. You can't be learning basics and maximizing test performance at the same time!

One size might not fit all

The prep schedule outlined above need not suit all aspirants since each one of you will have a different daily schedule depending on your work or your college load. So you would have to tailor or modify the plan to suit your needs. But what is most important that you make a plan and stick to it.

What matters more than frequency is regularity. No matter how hectic your day what is the barest minimum that you can eke out — can you ensure that you at least read the newspaper before turning in to bed on a really crazy work day?

If your weekdays are variable but your weekends are predictable then can you ensure that you make a weekend plan and stick to it?

Most often we have a clear long-term plan, in this case cracking the CAT come November, but whenever something else comes up in the shorter-term — a weekend with a friend visiting from out of town, a new movie or a new TV series that is supposed to insanely good — we end up accepting it. So in effect, short-term decisions end up jeopardizing long-term goals! So you have to say no to a few things, give up a few things (besides deciding to grow a beard till the test).

Whatever you plan you draw up, stick to it. Do not be like the guy who draws up a will but refuses to die!

Feel free to post any queries or help you might need in coming up with a prep plan. In the next post, we will look at the profile-building activities that you can take up.

How to build your profile for an MBA

This is a question that I get asked often by students and a very important one at that — *how do I build my profile?* So before we get on to the answer, let us evaluate what elements of a profile are. What are the elements of a “profile”?

Your profile is the impression that various elements in your resume create as a whole.

- Academic Performance
 - Your marks in X, XII, Graduation
 - Work Experience
 - Number of months
 - Academic Pedigree
 - The brand of the institution from which you have graduated or will graduate
 - Academic Achievements
 - Ranks secured at school (X & XII), college and university-level and/or performance in national or state-level entrance tests
 - Co-Curricular Achievements
 - Ranks in Olympiads, NTSE, Paper Presentations, Journal Publications and any other academics-related contests outside of regular school and college work
 - Extra-Curricular Achievements
 - Achievements in non-academic pursuits singing, dancing, sports, games, NCC, martial arts etc, Model UN etcetera
 - Positions of Responsibilities
 - Official posts held at a school, college and university-level
 - Pursuits of Special Interests
 - Any extra-curricular interest pursued out of passion but without achievements — reading, writing, sports, games, singing, dancing, painting, trekking, photography, short-film making
 - Most of the things that would go on to a resume can be fitted into one of the above labels.
-

What is a “good profile”?

A good profile is one which would rate as “average” or “above-average” on most of the elements listed above and have a spike on at least one of elements.

A spike is a level of achievement on a parameter or attribute that indicates that you are really better at it than most of the other people in the fray.

A few examples of what spikes are:

Academic Spike — Someone who has above 90% in X, XII and Graduation will be considered to have a huge spike in academics. The key is the 90 in graduation since most aspirants (at least in this part of the world) tend to have 90s in X and XII, it is the 90 in your graduation that will put you in the outlier category.

Sports Spike — Those who have participated in individual or team sports or games at a district, state and national level will be viewed as having a spike since most aspirants will have played but not professionally. A student I met recently told me that the moment he put forward his national-level badminton at the under-13 level in front of the NMIMS panel the interview changed (he made it despite with a merit rank in the 300s the fact that he had just cleared the cut-off with a score of 209. Even running the marathon or cycling if done seriously with achievements to speak about can be a major spike.

So similarly you can have a spike in any one area it can be leadership spike if you have always held positions of responsibility. It can be an extra-curricular spike if you have participated in a lot of dramatics, singing or dancing at college-level. It can be a special interest spike if you have formally taken up dancing, singing, painting, languages or any other interest and are pursuing it seriously.

Does your profile impact your MBA aspirations?

Your profile plays a major role in three things:

- The probability of you getting a call from premier institutions
- The conversation you are going to have in your PI
- The shortlists you are going to get during your summer & final placements

But all of the elements listed in the profile factors do not equally influence all the three things mentioned above.

Getting a call from premier business schools

Each b-school has a different set of criteria based on which it gives out calls. The usual elements that come into play are

- **CAT Score, Academic Profile & Work Experience**

Each b-school gives each of the three components a different weightage and in some cases no weightage at all.

IIM-A for example no longer gives weightage to work experience but Academic Profile (especially your Graduation Marks) play a major role. IIM-B gives weightage to work experience, IIM-C does not consider Graduation Marks and gives, IIM-I gives more weightage to XII marks etc.

Freshers need not worry most b-schools take in a healthy percentage of freshers — please understand that for colleges that consider work experience calls are not given out only to those who have work experience. The weightage for work experience will make it easier for working professionals to get a call — they can get in with a lower percentile when compared to freshers.

Also, for the first call it is only the quantity of work experience that will play a role and not the brand of the firm that you are working with.

What is important to note is that these criteria might change from year to year.
Do not worry about what you cannot change — your marks in the past — let the IIMs decide their weightage and give out calls based on their calculation, focus on what you can change.

Those who have graduated and have poor graduation marks need not worry since IIM-C does not consider it at all in their process; get a good CAT score and you are in!

Also please note that Academic Pedigree plays no part in this stage of the process.

The conversation you are going to have in your PI

Most top colleges send out a form to be filled out along with the call the next round. This form will ask you to fill out not just details about your academic profile and work experience but will also

- ask you to list achievements — co-curricular, extra-curricular and work-related (if applicable) and
- ask you to write answers to questions such as
-
- why do you want to do an MBA
- what are your career plans
- what are your strengths and weakness
- what is the biggest challenge you have faced in your life so far
- what is your biggest failure and what have you learnt from it
- what are your hobbies and interests

The panel will have your filled-up form when you go into the interview and you will be asked questions based on what you have filled up. This is where the achievements and interests element of your profile come into the picture. You can have a look at a sample form, that of S.P.Jain last year, [here](#).

Even if a college does not have a form and starts off with a tell me about yourself, the interview will be based on the things to tell about yourself that are not captured in the CAT application.

The two elements — brand value of the college where you pursued (or are pursuing) your bachelor's degree and the brand value of the firm that you are working for are not evaluated objectively, which means that there are no marks allotted to the same separately based on any criteria.

The panel will make it a part of the overall marks it awards to you in your PI, based on how you perform in the PI. So a good college brand by itself does nothing unless you do a good job in the PI.

Getting interview shortlists for summer internships & final placements

You will be having your summer placements 3 to 4 months into your MBA. So this means that your resume will not have changed at all. So the profile you have before getting into the b-school is what you will have while applying for summer training.

It is at this stage that the brand value of the college where you pursued (or are pursuing) your bachelor's degree and the brand value of the firm that you are worked for, are more important.

Firms will have loads of resumes from all b-schools and they tend to make their jobs easier by giving out shortlists to those with big brand names on their resumes. So this is where the real value of the IIT-tag kicks in! Also, all firms do not do this, only the real big consulting firms tend to do this.

How to build your profile

As mentioned earlier, you need to focus on what you change in your present and hence your future and not your past. The objective of this post is to give you a realistic idea of the selection process and help you chart out your future course of action. So do not get deflated but start looking at the ways below to improve your profile.

Take up certification courses aligned to your career aspirations

I am an engineer and I want to get into finance! Well to do this you have to show what steps you have already taken towards your goal.

A lot of engineers who are dead serious about getting into Finance are taking up the CFA exams, the US equivalent of the CA. A student of mine who is currently at IIM-C, the mecca in India as far as Finance aspirants are concerned, said that there about 70 students who have cleared at least Level 1 (out of 3) of the CFA! the CFA is neither an easy nor a cheap exam to prepare for and take. But if you are really, really serious you need to take it up.

Other options for those keen on pursuing Finance are taking up NSE certification courses about which you can learn here

A great option for those looking at any specialization be it Marketing, Finance, Analytics or Operations are the certification courses from premier international schools such as Wharton on Coursera.

You can choose courses by specialization and college (just ensure that you choose top-rung colleges).

Freshers can really benefit by taking up a few courses especially in Marketing and Analytics since they will give you an introduction to the world of business as well as ammunition for the PI.

Take up positions of responsibility

This is one thing that freshers should really go after in the next semester. Forget publishing a paper as part of the symposium, organize the symposium! There are loads of committees and clubs on campus, you need to get into at least one of them, actively

organize things/events as part of the committee/club and ensure that you a certificate for the same.

Take up social impact activities

While both freshers and working professionals can take this up, it is easier for the latter to become an active contributor to the CSR initiatives in your organization. You can also sign up to do volunteering work for an NGO working in the field of your interest — education, health care, environment etc.

One specific thing that freshers can look at is applying to and joining student organizations such AIESEC (they have city-wise chapters) or take part in their initiatives.

Take part in contests, events and cultural festivals

If you are not interested in organizing then take part in inter-college events based on your interest be it — case study contests, b-plan contests, singing, dancing, acting, sports whatever you are passionate about. The idea is that you should come across as someone who does more than just going to college and coming back.

Take an interest in the Entrepreneurship Cell of your college

A lot of people keep saying that they want to become entrepreneurs some years down the line when asked about career plans or Why MBA. But mostly the line is similar to — *any they lived happily ever; nobody knows how we are expected to take it at face-value. So show some interest and become a part of the E-Cell if your college has one!*

Take your interests to the next level

Your IIM interview can revolve entirely around your passion or interest. So take whatever interest you have and explore it seriously. If you like languages then take up learning a language and clear at least a level. A student of mine liked to read Manga (Japanese comics) and she ended up learning Japanese and clearing a few levels!

If you like outdoor activities such as trekking or cycling join the Chennai Trekking Club. If you have always wanted to train for a marathon then train to at least do a fraction of it.

Take your public speaking skills by joining Toastmasters

Those of you who want to really improve your communication skills with a view to doing well in the interviews should join Toastmasters — it is a not a training institute but a club for people to improve their spoken English. Once you become a member you can also take up positions of responsibility within the local chapter that you attend.

Do you do more, do you stand above the crowd?

As aspiring management professionals, you need to display that you are capable of doing much more than others. You need to show that you do more than just go to college or work and back. You need to show that you passionate about things apart from what is required. You need to show that you have the potential to perform on a much larger canvas.

So pick a few things from the list and get started!

How to improve your Verbal Ability for CAT?

As discussed in the previous post, the Verbal Ability sections on the CAT and other tests end up testing aspirants' general command over the language as much as the test-specific practice they have put in. So how does one improve one's command over the language? How does one improve one's reading speed? How does one widen the range of one's vocabulary? Well, the simple, boring & cliched answer — Reading, reading and more reading. There is no better way to build a solid vocabulary, a competitive reading speed and more importantly the General Awareness required cracking the WAT-GD-PI rounds of the IIMs.

You will be stretched way beyond your resume!

Here is a sampling of the kind of PI questions posed in the last few years.

- **What is BREXIT?**
- **Do you know about Pachauri?**
- **What does TERI stand for?**
- **What is the difference between MAKE IN INDIA and STARTUP INDIA?**
- **What is the difference between FDI and FII?**
- **What is your stance on what happened in JNU?**

The selection process of the IIMs in the second stage will be first time in your life when you are not judged by your marks. It will be the first time you will be tested for what you have apart from your marks, beyond your job role, over above what was expected of you in life.

The WATs and the PIs are thus geared towards testing your knowledge and view of the world around you.

Imagine yourself about a year from now sitting in front of a 2-3 member panel and facing a barrage of questions after having to go through the process of writing a WAT.

By the way, even when the question seems something that you can handle — What is your view on the JNU issue — you cannot just give a generic answer such as if they have raised the slogans then it is not correct. They will follow it up with questions such as — so did they raise slogans? is there evidence? and so on and so forth.

Your preparation has to be geared towards maximizing your chances of getting into an IIM and not just clearing the CAT. The IIMs call 4 people for every seat for the WAT-GD-PI. So doing well on the CAT does not by any means guarantee admission into the IIMs.

There have many cases (general and other categories) where call-getters assumed that their great percentiles will make their selection a mere formality only to for them to not end up converting a single call.

What should you be reading?

Apart from helping you to improve your VERBAL Ability, your reading should equip you with

- information & opinion about national and international news-making events over the course of the year
 - examples across various sectors that you can use in your WATs & GDs
 - knowledge about your preferred area of specialization
 - insight into the Indian psyche, the Indian economy and the Indian ground realities
- So your reading should ensure that you cover all of the above areas.**

General Knowledge + Current Affairs

- **2 Indian Newspapers – TOI for International and Business news + The Hindu for Editorials**
- **2 Indian News + Analysis Magazines – Scroll & The Caravan**
- **2 International News + Analysis Magazines – TIME & Newsweek**

Specialization & General Business Interest

The major challenge in WATs & GDs is to come up with relevant examples to support an argument. This stems from a lack of width in reading (even among those who read regularly).

Over the last few years, there have been a lot of books on topics of general as well as business interest that are short and easy to read (though not necessarily comprehensive). The ideas put forth in these books have been discussed and debated since there are always more than two sides to a coin :-). And you should not be surprised if in some indirect way they make an appearance in your WAT, GD or PI.

MALCOLM GLADWELL – A writer for the New Yorker magazine, his books have become bestsellers because of their off-beat as well as their simplicity, which some find too simplistic and unscientific. You should read at least one of these three books of his just to pick up some examples since his primary way of proving a point is by anecdotes!

- **Outliers** – In an example given in the book, Gladwell noticed that people ascribe Bill Gates's success to being “really smart” or “really ambitious.” He noted that he knew a lot of people who are really smart and really ambitious, but not worth 60 billion dollars. “It struck me that our understanding of success was really crude — and there was an opportunity to dig down and come up with a better set of explanations.”
- **Blink** – This book explains how the human unconscious interprets events or cues and how past experiences can lead people to make informed decisions very rapidly
- **Tipping Point** – While Gladwell was a reporter for *The Washington Post*, he covered the AIDS epidemic. He began to take note of “how strange epidemics were”, saying epidemiologists have a “strikingly different way of looking at the world.” The term “tipping point” comes from the moment in an epidemic when the virus reaches critical mass and begins to spread at a much higher rate.

Those looking at Marketing or HR should read one of the above books.

NICHOLAS NASSIM TALEB — One of the people who had predicted the 2008 financial crises, Taleb is an essayist, scholar, statistician, former trader, and risk analyst,^[1] whose work focuses on problems of randomness, probability, uncertainty and the Black Swan Theory

- What we call here a Black Swan (and capitalize it) is an event with the following three attributes.
- First, it is an outlier, as it lies outside the realm of regular expectations because nothing in the past can convincingly point to its possibility. Second, it carries an extreme ‘impact’. Third, in spite of its outlier status, human nature makes us concoct explanations for its occurrence after the fact, making it explainable and predictable.

His two most famous books are *Fooled By Randomness* and *The Black Swan*; the former deals with Black Swan events in the financial markets whereas the latter looks at such events in history. You should read one of the two, preferably the latter, which was described in a review by the *Sunday Times* as one of the twelve most influential books since World War II.

It goes without saying that those looking at Finance should read Taleb.

ELIYAHU GOLDRATT — An Israeli physicist who became a business management guru, he authored several business novels and non-fiction works, mainly on the application of the theory of constraints to various manufacturing, engineering, and other business processes; his most famous work is *The Goal*.

- The Goal — Like other books by Goldratt, *The Goal* is written as a piece of fiction. The main character is Alex Rogo, who manages a production plant owned by UniCo Manufacturing, where everything is always behind schedule and things are looking dire. At the beginning of the book, Bill Peach, a company executive, tells Alex that he has three months to turn operations at his plant around from being unprofitable and unreliable to being successful.

This book is used as part of Operations courses in business schools around the world (it was part of the syllabus during my time at IIM-L as well). So for those of you who are looking at *Operations*, this is a must-read

Indian Reality

A good part of the topics that are asked in WATs will revolve around India and once you enter a business school most of you will be building your careers in India. So it is essential that you understand three things — the psychology of the Indian consumer, India's economic history and the Indians whose travails go unheard.

- **We Are Like That Only** – Rama Bijapurkar An IIM-A Alum and noted management consultant, Rama Bijapurkar makes sense of the complex and inscrutable Indian market the many Consumer India's, their diverse and schizophrenic consumer behaviour and the way to make your company's fortune in this billion-plus market. Irreverent and insightful, this book answers the questions to twelve key facets of Consumer India.
- **India Unbound** – Gurcharan Das A former CEO of Procter & Gamble India, Gurcharan Das writes mainly about the transformation of India from the birth of the writer in (1942) to (1999). The author majorly speaks about the Indian politics and the economy of India. He categorizes the complete timeline from 1942 to 1999 in three major sections: ‘Spring of Hope (1942–65)’, ‘the Lost Generation (1966–91)’ & ‘Rebirth of Dream (1991–99)’ and tell various stories(memoirs) and the historical facts of that time.
- **Everyone loves a good drought** – P.Sainath Hailed by Amartya Sen as one of the world's great experts on famine and hunger, P.Sainath covers lives of those on the margins, the Indian farmer. For more than two years, the book remained No.1 amongst non-fiction bestsellers on diverse lists across the country. Eventually, it entered the ranks of Penguin India's all-time best sellers. The book is now in its thirty-first edition and is still in print.

Prepare for more than the test

One of the biggest challenges on a retake can be planning and pacing your prep well. November will seem too far away and yet a certain worry will keep nagging you at the back of your mind about whether you are doing enough.

I suggest that until the end of June, re-takers should focus on building their general Verbal Ability and awareness of the world around them in totality, of which the business world is an integral part.

In India, we always focus on the test but not on what follows after. Entrance tests become more important than the four-years of engineering, CAT becomes more important and what it means to be an MBA. I hope re-takers reading this post make an effort to go beyond the test and start looking at life after CAT.

How to increase your VA-RC score – Part 1

I have rarely done posts on CAT Verbal, the last one was this one on FIJs somewhere in 2013, and not entirely without reason.

The VA-RC section has always been a peculiar section on the CAT. It is quite tough to precisely answer the question — what do they actually test? In all honesty even they might not always be in the know!

Be that as it may, your first objective is to ensure that you at least clear the cut-offs, which will be around 35-40, and the second to maximise your score.

The section on which most test-takers are trigger-happy

Over years we have seen one thing that is constant about test-takers and verbal section is the number of attempts —irrespective of the difficulty-level of the section most test-takers end up attempting around 20 questions. This does not happen on other two sections. A tough paper will automatically result in fewer attempts.

With VA-RC test-takers attempt because they need to choose between options and not find the answer unlike on the other two sections!

Test-takers eliminate two options, they are not really sure which one of the two that are left is correct, think they have a 50 percent chance of getting it right, it is +3 vs -1, so they pull the trigger to mark an option before they go on to the next question.

Firstly, on 2 of the 4 answer options are usually fillers that you can eliminate easily. So while probability-wise it is 50% effectively it might only be 25%! A good example is the coin toss, while the probability of a heads is 50%, it is not guaranteed that 10 coin tosses will exactly give you 5 heads.

The questions they leave are usually related to Grammar and Vocab where they know that they do know!

What is the result go this I-will-attempt-since-I have-read it— got-it-down-to-two-options?

An accuracy rate that is more unreliable than the Met Department (though I hope their prediction is wrong and it does not rain tomorrow). So it comes as no surprise that when asked about their strengths and weakness within VA-RC section they say it varies from paper to paper!

So the first task is to stop marking options out of a certain feeling called gut-feel, let us leave our guts to deal with what they know best — food

The next task is to arrive at a method that helps you choose options with precision.

Increasing Your Accuracy on Reading Comprehension

To get straight to the issue at hand — I am caught between two options and want to ensure that I choose the right one most of the time.

For that to happen one has to change the process, the sequence of things that happen before you reach that particular point. If you change the process, you will be able to eliminate 3 options instead of two, you will find yourself caught between two options less frequently.

This is usually the process followed by most test-takers:

1. Reading the question is a formality to be dispensed with. Before going to the options one does not pause to reflect on what exactly are you looking for in the option
2. Each option is read as fast as possible
3. The goal is usually to finish reading all the options once, very fast

It is treated as a *swayamvar*: the options are prospective brides/grooms, we are greedy to quickly see all of them, we are also confident that the moment we see “the one”, we will know.

Alas like in real life we might end up liking more than one and then vacillate between the two!

Treat it rather like an interview process:

- define your criteria clearly
- interview each candidate thoroughly
- rank shortlisted candidates as per the criteria and select the best one

Read what the question is precisely asking you for

Let us take the following two questions and see why this is the most crucial first step.

According to the passage, which of the following best explains why there is little symbolism in Greek art?

What is this question asking you for? It is asking you to for the precise reason why there is little symbolism in Greek art.

Even without reading the passage we can eliminate a few options because they are not offering a “reason”. Let us have a look at the options we can eliminate straightforwardly by defining the question properly

- (1)
- (2) The struggle between the flesh and the spirit found an end in Greek art
- (3)
- (4) Greek statues were embodiments rather than symbols of qualities

Option (2) is telling you that the struggle was resolved in the Greek art. But how did it get resolved and how does that resolution link to the lack of symbolism in Greek art? the option is not answering the question, it is just giving you relevant information from the passage.

Option (4) is giving an example of how the lack of symbolism was reflected in Greek statues. Is it giving you a reason for lack of symbolism? No.

So always start by defining ***what job the correct option should do for you***, in this case – a reason for lack of symbolism. If you do this properly your elimination will become more precise.

Always eliminate by going back to the passage

How does one ensure that more often than not you choose the correct option in this seemingly 50-50 scenario? How do you turn the odds in your favor?

Step 1: Do not go by gut-feel, which usually translates into I think I have read this somewhere. Like in real life, the line "*I think I have seen you somewhere*" or "*lagta hai maine aapko pehle kahin dekha hai*", this does not work at all.
Also re-reading both options over and over will not help you break the deadlock, it will on end up making both options seem correct.

Step 2: To eliminate always refer to the relevant part of the passage.

Let us go back to the question discussed above to understand the process better. You would have eliminated these two fillers and have been left with the two close options:

- (1) The Greeks focused on thought rather than mysticism
- (2)
- (3) Greek artists were spiritual materialists
- (4)

The relevant paragraph:

The endless struggle between the flesh and the spirit found an end in Greek art. The Greek artists were unaware of it. They were spiritual materialists, never denying the importance of the body and ever seeing in the body a spiritual significance. Mysticism, on the whole, was alien to the Greeks, thinkers as they were. Thought and mysticism never go well together and there is little symbolism in Greek art. Athena was not a symbol of wisdom but an embodiment of it and her statues were beautiful grave women, whose seriousness might mark them as wise, but who were marked in no other way. The Apollo Belvedere is not a symbol of the sun, nor the Versailles Artemis of the moon. There could be nothing less akin to the ways of

symbolism than their beautiful, normal humanity. Nor did decoration really interest the Greeks. In all their art they were preoccupied with what they wanted to express, not with ways of expressing it, and lovely expression, merely as lovely expression, did not appeal to them at all.

The first sentence in boldface is nothing but option (3). It is telling you that everything about Greek art stems from the fact that they were spiritual materialists. So in a sense, this option is correct.

The second part in boldface is directly giving you the reason for the lack of symbolism they were thinkers, not mystics and hence stayed away from symbolism.

Both options are in a way correct. The focus on thought rather than mysticism was because of the fact that they were spiritual materialists. Option (1) is a subset of option (3).

This is where questions on CAT RC get tricky. Unlike on the GMAT, on the CAT there is a case for two options being suitable and one being better.

The ideal answer is a combination of (1) and (3). But since that isn't an option, one has to go with option (1) since it is closest to doing the job for you — giving you a reason for the lack of symbolism.

So this a case where we chose the specific option over the general. But there will be cases where you have to do the exact opposite — *the general over the specific*. Let us look another question from an old CAT paper.

When a culture is in a state of disintegration or transition the freedom of the artist increases – but the question of subject matter becomes problematic for him: he, himself, has to choose for society. This was the basis of all the increasing crises in European art during the nineteenth century. It is too often forgotten how many of the art scandals of that time were provoked by the choice of subject (Gericault, Courbet, Daumier, Degas, Lautrec, Van Gogh, etc.).

Why does the author quote examples of Gericault, Courbet, Daumier and three other?

- (1) They were all caught up in some art scandal or the other**
- (2) They failed in choosing subjects correctly for their societies**
- (3) The subjects they chose provoked controversies**
- (4) They represented the crises facing nineteenth-century European art**

Usually, test-takers eliminate (2) and (4), and debate between (1) and (3) and through logic convince themselves of one option over the other.

The first step as discussed is to define the question. What is the question asking you for?

The reason why the author quoted the example; we quote illustrate a point or an argument. This is different from *what are they examples of?*

Options (1) and (3) are telling you what are they examples of – they are examples of artists who caused scandal and examples of artists whose choice of subjects was controversial.

By why the author is quoting the examples? What is the larger point he wants to make?

He wants to illustrate the crises that facing nineteenth-century European art.

When the culture was insecure, there was no commonly agreed upon subject, like it was when cultures were secure, leading to greater freedom for artists to choose their subjects, which ended up causing controversies. So the correct answer is the option (4).

This question was clearly a case of looking at the larger picture and not getting caught in the specifics.

So how do you decide which route to take?

The litmus test is always – what is the question asking for?

Eliminate between close options by going back to the text and using your reasoning skills rather than relying on memory and using your gut-feel.

When do I take a chance and guess?

What do you do if you are not able to break the deadlock even after going through this process?

You have spent a good 2 minutes, is it not better to at least take a chance? Well, it depends on your overall accuracy levels.

If you have mastered this process, are able to choose options with precision and usually end up getting 8 out of 10 right, then go ahead and guess.

If your accuracy levels are low and you always choose options with a degree of doubt then use the MARK button. At the end of RC see how many questions you have MARKED for review.

If they are only a few in number then guess, else leaving the ones you are most doubtful about should be the best option.

The number of guesses should not be more than 20% of the number of attempts.

Reading and solving RCs differently

It is usually a choice between two ways of solving RCs:

- **Read fully and then go to the questions**
- **Read the questions and then go to the passage**

The second one is generally best avoided since once you read the questions, you will start looking only for specific words and phrases and end up with a less than half-baked idea of the passage.

The first one is what we generally recommend. But it's something that only people who are very good at Verbal can pull off without a hitch. The others tend to

- **start well and read the first paragraph properly**
- **lose interest midway through the passage**
- **skim through the last third of the passage**
- **rush to the questions**

So while the method is correct, executing it can be a problem. Is there a way out?

Read RCs like a set of linked CR passages

This approach is built around breaking the passage into smaller parts.

1. **Read the first paragraph and go to the question next to it**
2. **If the question is related to the paragraph answer it, else go to the next question**
3. **If you find a question related to the first paragraph, answer it**
4. **If not read the next paragraph and repeat the process.**

In short read a paragraph, see if any question is related to it, answer it and go to the next paragraph. This way we are looking at it like a set of linked CRs. At the end answer questions that are based on the entire paragraph (main purpose, central idea, tone etc.) and questions based on more than one paragraph.

In case the passage is made up of short paragraphs and has more about 6-8 paragraphs, then read two at a time.

This process is based on the knowledge of how questions to RC passages are set. At least one or two questions will be specific in nature since all questions can't be based on the whole passage and all questions will not turn up from one particular paragraph.

The biggest advantages of this process are that

- **you will not lose your reading focus since you will be breaking it into parts**
- **you will not forget something you have just read so you know where to look to eliminate between two close options**

The way to execute this without confusion is to write down the question numbers related to a passage; as you answer something strike it out. So toggling between questions becomes easier.

The passage about Greek art form which we discussed a question earlier in the post has three questions:

Question 1 – Para 2 & 3

Question 2 – Para 1

Question 3 – Para 3

It is not too late to get better at RCs, provided you change your approach and practice whatever we have discussed in this post. You cannot get better by only solving RCs during tests!

So try out the strategies discussed by practicing about 5 passages a day taking 2 min per question. Remember you cannot do the same things and expect different results!

In the next post, which will be up by tomorrow, we will take up the strategy for VA, time-allocation, and order of attempts for the VA-RC section.

How to increase your score on VA-RC – Part 2

In the previous post, we discussed how to maximize your VA-RC score by increasing your accuracy on RC. In this post, we will take a look at VA, time-allocation, and order of attempts for the section as a whole.

The VA section is not very different from RC for most test-takers in terms of maintaining a consistent accuracy. Grammar and vocab-based questions are the bugbears for many, while the rest of VA is the main scoring area..

Summary Questions

For summary questions you need to evaluate options with two specific questions in that order:

- are the key elements of the content present?
 - is the logical relationship between the elements as it is given in the passage
- The option for which answers to both questions are in the affirmative is the correct option.

Local communities have often come in conflict with agents trying to exploit resources, at a faster pace, for an expanding commercial-industrial economy. More often than not, such agents of resource-intensification are given preferential treatment by the state, through the grant of generous long leases over mineral or fish stocks, for example, or the provision of raw material at an enormously subsidized price. With the injustice so compounded, local communities at the receiving end of this process have no recourse except direct action, resisting both the state and outside exploiters through a variety of protest techniques. These struggles might perhaps be seen as a manifestation of a new kind of class conflict.

(1) A new kind of class conflict arises from preferential treatment given to agents of resource-intensification by the state which the local community sees as unfair.

(2) The grant of long leases to agents of resource-intensification for an expanding commercial-industrial economy leads to direct protests from the local community, which sees it as unfair.

(3) Preferential treatment given by the state to agents of resource-intensification for an expanding commercial-industrial economy exacerbates injustice to local communities and leads to direct protests from them, resulting in a new type of class conflict.

(4) Local communities have no option but to protest against agents of resource-intensification and create a new type of class conflict when they are given raw material at subsidized prices for an expanding commercial-industrial economy.
Do not rush to the answer options before you execute Step 1 –delineate the main elements of the passage.

The clarity to eliminate stems from the clarity with which you delineate the passage elements.

- Unfair exploitation of resources
 - Local communities have no option but to protest
 - A sign of new class conflict emerging
- Now proceed to the options.

1. No mention of protests by local communities
2. No mention of class conflicts
3. All three elements present
4. All three elements present

Option (4) makes an incorrect logical relationship — Local communities have no option but to protestand create a new type of class conflict.

The local communities are not creating class conflict — it is an outcome of the whole situation — unfair exploitation leads to protest leads to class conflict

Now the fact is that this a medium-level question that you might answer correctly without following this process. But following the process will ensure that you will not commit silly errors and more importantly get the tougher questions right. Remember a medium-level question does not require process orientation or technique, like batting in India does not, tougher level questions, like batting conditions in England, test your technique.

Another question that is tougher than the previous one.

Modern bourgeois society, said Nietzsche, was decadent and enfeebled – a victim of the excessive development of the rational faculties at the expense of will and instinct. Against the liberal- rationalist stress on the intellect, Nietzsche urged recognition of the dark mysterious world of instinctual desires – the true forces of life. Smother the will with excessive intellectualizing and you destroy the spontaneity that sparks cultural creativity and ignites a zest for living. The critical and theoretical outlook destroyed the creative instincts. For man's manifold potential to be realized, he must forego relying on the intellect and nurture again the instinctual roots of human existence.

(1) Nietzsche urges the decadent and enfeebled modern society to forego intellect and give importance to creative instincts.

(2) Nietzsche urges the decadent and enfeebled modern society to smother the will with excessive intellectualizing and ignite a zest for living.

(3) Nietzsche criticizes the intellectuals for enfeebling the modern bourgeois society by not nurturing man's creative instincts.

(4) Nietzsche blames excessive intellectualization for the decline of modern society and suggests nurturing creative instincts instead.

What are the elements?

According to Nietzsche

- modern bourgeois society is decadent and enfeebled
- the reason is the excessive focus on the intellect
- we need to forego the intellect and rely on instinct

This is a case where all almost four options have all the elements in place, making the question tougher; options have to be eliminated based on the logical relationship between the elements.

1. the link between excessive intellectualization and the state of society is not mentioned, it is assumed, but a summary should not miss out on crucial casual links
 2. he is not asking society to smother the will, in fact it is the other way around
 3. he is not criticising intellectuals as a group but the excessive use of the intellect as a general phenomenon
 4. all the elements and the logical relationships are correctly captured
-

Odd Sentence Out

In all probability, the **Odd Sentence Out** will be a feature on the CAT since it is a recent phenomenon and also lends itself well to being used for TITA.

Let us look at a question at the question below.

1. *It is a bonding process with the entire situation where you, your car and its name make the entire equation.*
 2. *Good car names are catchy and fit the product, such as the “Beetle” or the “Mini”.*
 3. *Marketing departments of car companies spend a lot of time and money thinking up names for cars.*
 4. *The car you drive tells the world about your status, how much money you have and the socio-economic group you belong to (or want to belong to).*
 5. *The name should be a reflection of the name product and target group.*
- The first step is to come up with a phrase/title to which four of the five sentences can be linked. It is best to be as specific as possible.

For this set of sentences the phrase that describes the overarching theme can be:

- car names
- the importance of car names

While the first one will suffice, the second one comes close to the theme. Such an approach will make your job easier on the tougher questions.

It need not be a phrase it can also be a sentence that can serve as a title to the paragraph made up of the four sentences that go together.

In the above question, all sentences except (4) can be linked to the importance of car names.

How to allocate time on the Verbal section of CAT 2015

Rule # 1: Leave Jumbled Paragraphs in the TITA format for the very end. Jumbled paragraphs with options were a strength for many but without options, they can become a liability in terms of time consumption.

If you attempt them in regular time you will on average end up wasting at least 2 minutes on them and will not be sure of the answer as well. So solve them after finish everything else.

Solve RC as a group

While those who are extremely good at Verbal can solve questions as they appear, on average it makes sense to solve questions of a particular type together so that you can manage your time better.

You can choose to do RCs first and VA next or the other way around depending on what you are comfortable with.

- **Read the part of the first paragraph of each passage and rate it on a scale of 10 for readability (this will be subjective since test-takers have different levels of comfort with passages from different areas).**
 - **Set aside the one with the lowest rating for later and do the rest.**
 - **Set a time-limit of 2 min per question including passage reading time. Give yourself a buffer of 5 minutes**
 - **Solve the passages from the highest-rated onwards**
 - **Come back to the passage you have set aside at the end if you have the time.**
 - **Do not waste time trying to redo questions on which you were able to choose between two options. If you solved it as per the process the first time, then it might be a question better left alone.**
-

How to approach the VA-RC section

CAT Verbal questions are notorious for their ambiguity. Your accuracy on this section depends to a very high degree on your process orientation.

The only way you can successfully tackle the ambiguous nature of CAT Verbal questions is by following the processes that we have outlined. If the question is ambiguous even after that then you are better off leaving that question alone.

Imagine the mess if you are swinging your bat wildly and the ball is swinging as well!

This is something that is true even for those who have a good felicity with the English language. Your comfort level with the language will help you read fast and easily understand passages but option elimination is something that is closer to logical reasoning than verbal ability.

So approach all questions with the mindset that you will try to dissect options with a scalpel and not try to smash them with a hammer :-).

I hope the two posts have given you some much-needed clarity before the test. Feel free to drop in a comment for any clarification you might need.

How to increase your VA accuracy on the CAT

One thing that has always bothered me a lot whenever I interact with students, is that they seem to be very reluctant to let go of their playing-the-percentages attitude to tests. Throughout school and college, we tend to study by playing the percentages — giving importance to topics as per the number of questions that appear from that topic in the exam. While this might be a great strategy for school and college exams, as far as aptitude tests go, this strategy is suicidal purely because of the fact that the difficulty level and the number of questions across areas do not follow a fixed pattern.

How is this related to Verbal Ability in the current pattern of the CAT?

The increase in the number of Reading Comprehension questions to 24 started with CAT 2015 when the CAT moved to a 3-section pattern from a 2-section one.

So until 2015, RC was something that people conscientiously avoided.

But the moment RC changed to 24 questions people started ignoring VA. Verbal Ability has almost become a side-show relegated to the last 10 minutes of the section and even within VA, the bulk of the time goes to the second most useless question type in the history of Verbal Ability question types across tests — Parajumbles.

I think as a strategy this is quite misplaced since CAT is always about picking out the questions that will give you three marks in the shortest possible time and having the technique to hit high accuracy levels in executing a solution.

The VA questions are TITA, and hence carry no negative marking, that does not mean that you answer them in a cavalier fashion. You should look at them like legitimate deliveries, off which you should score 3 marks, rather than treat them like free-hits!

In this post, we will look at the specific strategies that will help you maximize the return on time invested in the three VA question types that you will encounter. We will use the actual VA questions from CAT 2017 – Slot 2 to discuss strategies.

First RC and then VA or first VA and then RC?

Most test-takers seem to be operating with the first RC and then VA strategy.

I would, as always, say that the difficulty of the questions will determine which order you should attempt the questions in.

The first exercise you should hence do is to ascertain the difficulty level of the section.

How do you go about doing this?

- **Read the first paragraph of each RC and give it a rating out of 10 with 1 for very difficult and 10 for very easy.**
 - **To give this rating first evaluate how easy is the language of the passage irrespective of the topic. Are you able to easily understand it and grasp the content or do you feel that this needs to be read slowly?**
 - **Secondly, look at the complexity of the arguments presented — the language might be simple, the topic might be one that you like, but the arguments put forth can be complex**
 - **Ensure that you rate the passages in such a way that your rating tells you in which order you should attempt the passages. For example, if you find two passages to be of moderate level, do not rate both as 7, differentiate and give each one rating that helps you decide the order, say a 7 and a 7.5.**
 - **Attempt every passage that is rated 7 and above in the order of the rating — highest to lowest.**
 - **Once you are through with all the passages that are 7's, do the VA questions and come back to the other RCs.**
 - **On an easy section, 5 out of 6 passages might be 7 and above, in which case, you will know that you have to really pick up the pace and answer as many questions as possible.**
 - **On a tough section, 3 out of 6 might be 7 and above, so you know that you have to really focus on accuracy and also squeeze out as many as possible out of VA as well.**
- So whatever the position at which you attempt VA, you should try to get as many marks as possible out of the 10 questions in 15 minutes.**
-

How to crack the Summary Question

The only way to reach higher accuracy levels on VA is to move from solving questions based on gut-feel to using a process to arrive at the answer. Leave your gut to what it does best — digestion!

What is the usual process?

Read the passage, read the options and then if it is an easy question, the answer will become obvious, if it is a tough question, you will get caught between two options.

Where is the space for reasoning in all of this or when does the reasoning happen?

So the first step is to stop after reading the paragraph and formulate what you are looking for.

Every paragraph will be about three big ideas (at most) — X, Y, and Z — all the rest of the sentences will be supporting arguments.

- **After reading the paragraph you have to paraphrase the X and Y and Z of it, using the least number of phrases.**
 - **You then proceed to check each option to see whether it has the X, the Y, and the Z**
- Let us take a question from CAT 2017 and see how to execute this process.**

North American walnut sphinx moth caterpillars (*Amorpha juglandis*) look like easy meals for birds, but they have a trick

up their sleeves – they produce whistles that sound like bird alarm calls, scaring potential predators away. At first,

scientists suspected birds were simply startled by the loud noise. But a new study suggests a more sophisticated

mechanism: the caterpillar's whistle appears to mimic a bird alarm call, sending avian predators scrambling for cover.

When pecked by a bird, the caterpillars whistle by compressing their bodies like an accordion and forcing air out through

specialized holes in their sides. The whistles are impressively loud - they have been measured at over 80 dB from

5 cm away from the caterpillar - considering they are made by a two-inch long insect.

1. North American walnut sphinx moth caterpillars will whistle periodically to ward off predator birds - they have a

specialized vocal tract that helps them whistle.

2. North American walnut sphinx moth caterpillars can whistle very loudly; the loudness of their whistles is shocking

as they are very small insects.

3. North American walnut sphinx moth caterpillars, in a case of acoustic deception, produce whistles that mimic

alarm calls to defend themselves.

4. North American walnut sphinx moth caterpillars, in a case of deception and camouflage, produce whistles that mimic

bird alarm calls to defend themselves.

What are the X, Y, and Z of this paragraph

- X — The Walnut sphinx is not an easy prey, it has a trick up its sleeve.
- Y — A whistle that mimics alarm calls of birds that scares predators away.
- Z — A whistle that is quite loud given its small size.

Now check the options for the one that contains all three.

1. Lacks X, the part about the trick
2. Lacks X, the part about the trick
3. Has X and Y but not Z
4. Has X and Y but introduces *camouflage*, which is a visual deception not mentioned in the passage, making it incorrect.

Option 3 lacks Z but has to be the option you must choose since it has the two important ideas, X and Y.

The VA of CAT 2017 had two summary questions, let us look at the other one so that we can get a proper hang of the process.

Both Socrates and Bacon were very good at asking useful questions. In fact, Socrates is largely credited with coming up with a way of asking questions, 'the Socratic method which itself is at the core of the 'scientific method', popularised by Bacon. The Socratic method disproves arguments by finding exceptions to them, and can therefore lead your opponent to a point where they admit something that contradicts their original position. In common with Socrates, Bacon stressed it was as important to disprove a theory as it was to prove one - and real-world observation and experimentation were key to achieving both aims. Bacon also saw science as a collaborative affair, with scientists working together, challenging each other.

1. Both Socrates and Bacon advocated clever questioning of the opponents to disprove their arguments and theories.
2. Both Socrates and Bacon advocated challenging arguments and theories by observation and experimentation.
3. Both Socrates and Bacon advocated confirming arguments and theories by finding exceptions.
4. Both Socrates and Bacon advocated examining arguments and theories from both sides to prove them.

What are the X, Y, and Z for this one

- X — Socrates came up with the method of asking questions popularised by Bacon.
- Y — The method involved disproving/proving an argument by asking questions and finding exceptions to the same.
- Z — Bacon also stressed science as a collaborative effort in which scientists challenged each other

Which option fits the bill?

1. Limits the idea to "opponents" whereas the paragraph talks about arguments in general.
2. Talks about challenging but does not mention proving and disproving.

- 3. Talks solely about confirming but the paragraph talks about proving and disprove since Bacon stresses that disproving is as important as proving.
- 4. Examining from both sides — best paraphrases proving or disproving by looking for exceptions.

What will happen on tougher Summary questions?

- One among X, Y and Z might be missing and you need to pick the two important ones among the three.
 - The correct option will not use phrases from the paragraph but express the same using different words, in other words, paraphrasing.
-

How to crack the Out Of Context Sentence In Context Question

First introduced in CAT 2015 (if I am not wrong), the Out Of Context Sentence is the newest question type on the Verbal Ability section — there has been no new question type since.

I for one feel that this can be a tricky question type where a potential +6 (in under three minutes) can easily become a -2, and you know what an increase in 8 marks to your Verbal score can mean.

While test-takers use a semblance of a strategy when faced with other VA question types, I am not sure if they have a specific approach to tackle this question type. Even if they do have a strategy, it is likely to be related to Parajumbles since this question type is seen as an offshoot of the Parajumbles question type.

How do you go about solving this question type?

- The first thing to do or rather not do — do not try to make a coherent paragraph!
 - Trying to make a paragraph will mean that you start looking for *starters* and *enders* and will end up wasting a lot of time on trying to sequence the sentences when that is not the task at hand.
 - Your job is to get the odd-one out of your way and not sequence the sentences and then get the odd-one out of your way
 - After you read the first sentence, label the sentence with a phrase that captures the content of the sentence, say — advantages of echolocation, latest advances in neuroscience etc.
 - You have to then proceed to do the same with the other sentences
 - You will find that
 - the label you have given to the first sentence is applicable to all but one other sentence — the out of context sentence or
 - the label you have given to the first sentence is applicable only to itself and the other four need a different label
- Let's take a few questions from last year and go about executing a strategy.

1. Although we are born with the gift of language, research shows that we are surprisingly unskilled when it comes to communicating with others.

2. We must carefully orchestrate our speech if we want to achieve our goals and bring our dreams to fruition.

3. We often choose our words without thought, oblivious of the emotional effects they can have on others.

4. We talk more than we need to, ignoring the effect we are having on those listening to us.

5. We listen poorly, without realizing it, and we often fail to pay attention to the subtle meanings conveyed by facial expressions, body gestures, and the tone and cadence of our voice.

What are labels that we can give to the content of each of the sentences?

Remember that you have to give a label that captures the content of the sentence at a top-level.

- 1 — Human troubles in communicating with others
- 2 — Speech control and goal achievement
- 3 — Human troubles in communicating with others (choose words without thought)
- 4 — Human troubles in communicating with others (talk more than necessary)
- 5 — Human troubles in communicating with others (listen poorly)

From this exercise, it is obvious that sentence 2 is the odd one out.

The other question from CAT 2017 was not this straightforward.

1. Over the past fortnight, one of its finest champions managed to pull off a similar impression.

2. Wimbledon's greatest illusion is the sense of timelessness it evokes.

3. At 35 years and 342 days, Roger Federer became the oldest man to win the singles title in the Open Era - a full 14 years after he first claimed the title as a scruffy, pony-tailed upstart.

4. Once he had survived the opening week, the second week witnessed the range of a rested Federer's genius.

5. Given that his method isn't reliant on explosive athleticism or muscular ball-striking, both vulnerable to decay, there

is cause to believe that Federer will continue to enchant for a while longer

As you read the first sentence it is clear that this question is going to be tough — there are no nouns that tell you what the subjects are, but yet can you come up with a phrase?

How about — a championship, a player and an impression?

Let us start with this and work our way forward by looking at the second sentence.

From this it is clear, that the championship is *Wimbledon*, the impression is *timelessness* and unless you have just landed from a different planet and have decided to take the CAT, you would have figured that the player is *Roger Federer*! So what is the label? *Wimbledon, Roger Federer & Timelessness*.

- 1 — **Wimbledon, Roger Federer & Timelessness**

- **2 – Wimbledon, Roger Federer & Timelessness**
 - **3 – Wimbledon, Roger Federer & Timelessness (oldest player ever)**
 - **4 – Federer's progress from the first to the second week**
 - **5 – Wimbledon, Roger Federer & Timelessness (will play for longer)**
- What will happen on tougher Summary questions?**
- **You won't find all the elements necessary to label the sentence right away**
 - **You might not be able to fit a label precisely**
 - **either the label you gave to the first sentence was not precise enough or**
 - **the sentence you are seeking to fit the label to is an inference from the previous one and the label will fit once you able to identify that it is an inference and hence related**
-

I will not respect Parajumbles by giving a strategy for the same

There are question types and there are Parajumbles. It is possibly the oldest question type on the CAT and has been around on and off basis in the '90s if I am not wrong.

It is a question type that is most intelligible to test-takers and thus a type that everyone wants to take a shot at.

What do I mean by most intelligible?

Let us use a board game analogy. If you see a chess board arranged for two players to begin unless you know what chess is you can't figure out what to do. Even if you watch two players playing you can't figure it out in a trice.

What if you see a snakes & ladders board with a dice on it? You can figure out how to play it. Even if you do not know what a snake does you can figure that out to be the opposite of what a ladder does. In the worst case, you can see two people play for 2 minutes and understand.

To use another analogy, this time from a casino set up, Blackjack versus Roulette.

In short, PJs are like snakes & ladders and Roulette, too easy understand to not want to take a shot.

So why do I hate it?

Well, I have issues with how the question is made.

When that paragraph in question was born, it did not know that it will grow up and become a Parajumble question!

Did its progenitor imagine that this paragraph will one day become a pain in the wrong place for every CAT aspirant?

Since question writers are not writing their own paragraphs but use the words of others, I have serious doubts whether sentences can always follow one logical sequence.

Even with options, tough PJ questions were always a time sink with no process to rely on.

Without options, it's not easy to fix one sequence out of a potential 120. Even if you fix 2 sentences it still leaves you will six options!

So what should you do?

Leave PJs right till the very end, when you have just 3 to 4 minutes left. Do not get engage with them earlier, unless you find that there is nothing else left to attempt.

Since they seem so straightforward, there is a huge chance that you will end up wasting 6 to 8 minutes on two PJs since something tells you that you can crack it.

The CAT VA as a whole does not test reasoning anymore, reasoning as defined in formal terms and tested through question types such as CR and Syllogisms.

While I have been able to outline a process to manage the other two question types what I can say for PJs except – look for connections.

At this point, I am very much tempted to launch into a rant about how the CAT VA-RC section is the most arbitrary section of all time, about how the GMAT VA is as good as it can get as far as testing Verbal Ability is concerned but I shall resist the temptation for now.

Some of you might be scoring well on the VA-RC section and might feel that you do not need to follow any process when your gut can do the job.

I myself am naturally good at Verbal but I realized a long time ago that having a process or a technique gives you a way to think and reason your way through tough questions, the easy ones can be taken care of by your gut. But even on the easy ones having a process ensure that you reach there faster without making any silly mistakes.

So those of you who find your scores in Verbal going up & down or feel that you are unable to move it beyond a particular level should diligently apply these strategies over quite a few questions and tests till they become your natural way of solving.

How to increase your accuracy on RC – 1

So much of a weight does RC have on the CAT, so many are the difficulties faced by test-takers and so frequent are the queries that I receive about RC, despite the previous post and the Last Mile To CAT sessions, that I thought that it will be best to devote a series of posts to cracking Reading Comprehension. So before we dive in, I suggest that you read the previous post that outlines how to choose which RCs to solve.

Passage to questions or Questions to Passage or...

Now the big question has always been whether to read the passage first and then go the questions or read the questions first and then go to the passage.

The problem with reading the entire passage first is that it is a great strategy for those who are exceptionally good and comfortable with reading long texts. What does being exceptionally good and comfortable mean?

1. The ability to read through the whole passage without losing concentration and the thread of the passage
2. The ability to answer the primary purpose, the central idea or other summary questions (questions that test your understanding of the passage as a whole) without going back to the passage
3. The ability to remember the exact part of the passage to go back to find the answer to a specific question

With most Indian test-takers the first ability itself is suspect. While they might start with the best of intentions, by the time they reach of the middle of the passage they

- start losing interest
- start sneaking a peek at the questions
- somehow manage to reach the end or
- start going back and forth between the questions and the passage

The problem with looking at the questions first is that we are then not doing RC but Match The Following. So that is something that I would rule out straightaway.

Paragraph to questions approach

What I would recommend to most test-takers is a third way that addresses the problems of the first two.

1. Read one paragraph, check if there is any question related to it. If there is then solve it immediately — this will increase your accuracy on specific questions since you will have just read the specific part of the passage.
2. If there is no question related to it then go ahead to the next paragraph and repeat the exercise.

3. Solve all Summary Questions at the end
4. If the paragraphs are short in length, say 4 lines or fewer, you can read two at a time and then go to the questions

While I have been advocating this approach I am still getting queries around both the approach and RC accuracy in general.

Hello sir, these posts are very informative. Sir, I am facing problems regarding my attempts and accuracy in VARC. I have

While answering a question which is based on a particular paragraph in an RC passage, should the answer be specific to the whole gist of the passage?

One method you suggested is reading a particular paragraph and answering question related to that paragraph. So I don aspects of the passage? Should the answer these type of questions need not necessarily resonate with the whole passa

And one thing I have observed is that I consume a lot of time just in reading the passages. And even with solving question for a long time. Can you advise how can I improve on this?

 Approved

 Spam

 Trash

 Like

 Edit

 Reply

The best way to answer this and other queries is by taking the RCs from last year's CAT and solving them. This one is from the second slot last year.

Creativity is at once our most precious resource and our most inexhaustible one. As anyone who has ever spent any time

with children knows, every single human being is born creative; every human being is innately endowed with the ability

to combine and recombine data, perceptions, materials and ideas, and devise new ways of thinking and doing.

What fosters creativity? More than anything else: the presence of other creative people. The big myth is that creativity

is the province of great individual geniuses. In fact creativity is a social process. Our biggest creative breakthroughs

come when people learn from, compete with, and collaborate with other people.

Cities are the true fonts of creativity. With their diverse populations, dense social networks, and public spaces where

people can meet spontaneously and serendipitously, they spark and catalyze new ideas. With their infrastructure for

finance, organization and trade, they allow those ideas to be swiftly actualized.

As for what stanches creativity, that's easy, if ironic. It's the very institutions that we build to manage, exploit

and perpetuate the fruits of creativity – our big bureaucracies, and sad to say, too many of our schools. Creativity is

disruptive; schools and organizations are regimented, standardized and stultifying.

The education expert Sir Ken Robinson points to a 1968 study reporting on a group of 1,600 children who were tested over

time for their ability to think in out-of-the-box ways. When the children were between 3 and 5 years old, 98 percent

achieved positive scores. When they were 8 to 10, only 32 percent passed the same test, and only 10 percent at 13 to 15.

When 280,000 25-year-olds took the test, just 2 percent passed. By the time we are adults, our creativity has been wrung out of us.

I once asked the great urbanist Jane Jacobs what makes some places more creative than others. She said, essentially, that

the question was an easy one. All cities, she said, were filled with creative people; that's our default state as people.

But some cities had more than their shares of leaders, people and institutions that blocked out that creativity.

She called them "squelchers."

Creativity (or the lack of it) follows the same general contours of the great socio-economic divide - our rising inequality -

that plagues us. According to my own estimates, roughly a third of us across the United States, and perhaps as much as half

of us in our most creative cities - are able to do work which engages our creative faculties to some extent, whether as artists, musicians, writers, techies, innovators, entrepreneurs, doctors, lawyers, journalists or educators - those of us

who work with our minds. That leaves a group that I term "the other 66 percent," who toil in low-wage rote and rotten jobs -

if they have jobs at all - in which their creativity is subjugated, ignored or wasted.

Creativity itself is not in danger. It's flourishing is all around us - in science and technology, arts and culture, in our rapidly revitalizing cities. But we still have a long way to go if we want to build a truly creative society that supports and rewards the creativity of each and every one of us.

Question 1

In the author's view, cities promote human creativity for all the following reasons EXCEPT that they contain spaces that

- A) enable people to meet and share new ideas
- B) expose people to different and novel ideas, because they are home to varied groups of people.
- C) provide the financial and institutional networks that enable ideas to become reality.
- D) provide access to cultural activities that promote new and creative ways of thinking.

Question 2

The author uses 'ironic' in the third paragraph to point out that

- A) people need social contact rather than isolation to nurture their creativity
- B) institutions created to promote creativity eventually stifle it
- C) the larger the creative population in a city, the more likely it is to be stifled
- D) large bureaucracies and institutions are the inevitable outcome of successful cities

Question 3

The central idea of this passage is that

- A) social interaction is necessary to nurture creativity
- B) creativity and ideas are gradually declining in all societies
- C) the creativity divide is widening in societies in line with socio-economic trends
- D) more people should work in jobs that engage their creative faculties

Question 4

Jane Jacobs believed that cities that are more creative

- A) have to struggle to retain their creativity
- B) have to 'squelch' unproductive people and promote creative ones
- C) have leaders and institutions that do not block creativity
- D) typically do not start off as creative hubs

Question 5

The 1968 study is used here to show that

- A) as they get older, children usually learn to be more creative
- B) schooling today does not encourage creative thinking in children
- C) the more children learn, the less creative they become
- D) technology today prevents children from being creative

Question 6

The author's conclusions about the most 'creative cities' in the US (paragraph 6) are based on his assumption that

- A) people who work with their hands are not doing creative work
- B) more than half the population works in non-creative jobs
- C) only artists, musicians, writers, and so on should be valued in a society
- D) most cities ignore or waste the creativity of low-wage workers

Paragraph 1

A quick scan through the questions shows that there is no question based on the first paragraph. So you can move to the second one without answering any question.

Do not try to remember questions, if you do so then you will again be doing method 2 – match the following instead of RC.

Paragraph 2

The first question is a specific question based on paragraph 2.

It is an EXCEPT question that is asking you to identify the reason that is NOT stated to make the claim that cities promote creativity.

This has to be the easiest RC question of all time – A, B and C are clearly stated in the passage, D is not mentioned anywhere.

In effect, you have 3 marks in the bag in under 4 minutes.

Paragraph 3

As you start reading the first sentence of the third paragraph itself you should know that there will be a question on this; the first sentence itself says – it's ironic. It goes without saying that they will test your understanding of what ironic means. The paragraph itself explains it. You go to the questions to find the next question based on it and pocket 3 more marks.

It is again pretty direct and you should have no trouble confirming option B as the right option.

By now you should have 6 marks in 6 minutes.

If you find this question tough then I am afraid there is a fundamental comprehension problem that no amount of strategies or shortcuts can solve. It might sound harsh but you might have to really take another shot at the CAT and spend a lot of time improving your ability in reading and comprehending text written in English.

If you have taken 10 minutes to score these 6 marks from three paragraphs then reading speed is a major issue. The only way out is to practice RCs alone non-stop for a week so that you put so much stress on your reading muscle that it has to grow.

Paragraph 4

After reading this paragraph, you should again scan the questions and you will find that question 5 is related to it.

This is where you will first encounter a mild case of — *I am caught between two options.*

Options B and C might seem to be vying for your vote.

So how do you break this deadlock?

In the words of my colleague Sujit Sir, who is the author of a famous RC Book, and is the one who makes most of the SimCAT RC questions, the first step is to identify the superficial difference between the options.

When caught between two options,

- 1. Phrase the difference between the two options**
- 2. See which one is relevant to the question and eliminate if possible**
- 3. If not go to the specific part of the passage**
- 4. If you are still unable to break the deadlock, go to the previous paragraph**

Option B — Schooling smothers creativity

Option C — Learning smothers creativity

Even without going back to the paragraph you can see that C has to be wrong! Between learning and schooling, the latter is definitely the culprit.

If you go to the paragraph it will be clear that Ken Robinson is an education expert and he is referring to schools.

If it is still not clear then go to the previous paragraph, the last sentence screams the answer out loud.

By the way, I watched the Ken Robinson videos a long time back — this and this are definitely worth a watch.

9 marks in 8 minutes.

Paragraph 5

There is a question on this as well — question 4 — and as mildly indirect as a question can get.

If you are keeping count 12 marks in 10 minutes.

Paragraph 6

The last question is based on this. It is an assumption question that is pretty direct

The author says — in most of our cities 1/3, and in some 1/2, of our people work in creative jobs or jobs of the mind, while the other 2/3 have no jobs or do rotten jobs.

The assumption is captured by only by option B.

15 marks in 13 minutes.

At the end of the exercise, you are left with one unanswered summary question.

This is one of those typical CAT RC questions on which the options frustrate me since I do find any of them to be precisely correct. So the best option on CAT RC questions — reject don't select. Your heart won't leap and dance when you see the correct option, you have to reject and be happy with whatever is left.

Question 3

The central idea of this passage is that

- A) social interaction is necessary to nurture creativity
- B) creativity and ideas are gradually declining in all societies
- C) the creativity divide is widening in societies in line with socio-economic trends
- D) more people should work in jobs that engage their creative faculties

If we go by rejection then

- A can be kept
- B can be rejected since the last paragraph categorically says that creativity is flourishing
- C can be rejected since the passage only says that creative divide follows the socio-economic divide it does not say that the divide has increased
- D can be kept

Now we again boil down to two options and this is a summary question.

You can defend and not score instead of getting out

Should you always mark an answer for every RC question you encounter?

The summary question above is a poorly made one since neither option exactly captures the central idea.

Now if I look at my time spent so far, I have 15 marks in about 16 minutes, which is great from an MPM or Marks Per Minute perspective.

So do I need to break my head and waste my time over this silly question?

Nope, I will be better off moving on without collecting a negative.

Test-takers refuse to consider letting a question go an option. If they have spent so much time reading they think they might as well mark.

The odds of getting it right when stuck between two options are still 50 percent provided you haven't eliminated the correct option!

So do yourself a favor – defend and not score instead of getting out.

Just to close things on this passage, between A and D I would choose A since it covers a larger portion of the passage and the author is not directly making a claim that more people should be doing creative jobs. The author only says that more people can be in creative jobs.

The reason I favor this approach is that as a question-setter (I have made a few RCs for this year's SimCATs as well) I know that to make 6 questions I have mine each and every paragraph for questions.

You can maybe have a 3 question passage with no question from a particular passage. But a 6 question passage will have 3 questions from three separate paragraphs.

I know that one passage isn't enough to prove my point. So I will take up all the passages from last year's second slot and analyze them through this lens. Hope by the end of this series of posts your RC woes will have reduced considerably.

How to increase your accuracy on RC – 2

In the [previous post](#), we discussed a strategy to approach RCs and solved an actual passage from CAT 2017 Slot 2. In this post, we will take up a few more passages from the same slot and execute the strategy.

PASSAGE 2, 531 words

During the frigid season it's often necessary to nestle under a blanket to try to stay warm. The temperature difference between the blanket and the air outside is so palpable that we often have trouble leaving our warm refuge. Many plants and animals similarly hunker down, relying on snow cover for safety from winter's harsh conditions. The small area between the snowpack and the ground, called the subnivium might be the most important ecosystem that you have never heard of.

The subnivium is so well-insulated and stable that its temperature holds steady at around 32 degree Fahrenheit (0 Celsius).

Although that might still sound cold, a constant temperature of 32 degree Fahrenheit can often be 30 to 40 degrees warmer than the air temperature during the peak of winter. Because of this large temperature difference, a wide variety of species depend on the subnivium for winter protection.

For many organisms living in temperate and Arctic regions, the difference between being under the snow or outside it is a matter of life and death. Consequently, disruptions to the subnivium brought about by climate change will affect everything from population dynamics to nutrient cycling through the ecosystem.

The formation and stability of the subnivium requires more than a few flurries. Winter ecologists have suggested that eight inches of snow is necessary to develop a stable layer of insulation. Depth is not the only factor, however. More accurately, the stability of the subnivium depends on the interaction between snow depth and snow density. Imagine being under a stack of blankets that are all flattened and pressed together. When compressed, the blankets essentially form one compacted layer.

In contrast, when they are lightly placed on top of one another, their insulative capacity increases because the air pockets between them trap heat. Greater depths of low-density snow are therefore better at insulating the ground.

Both depth and density of snow are sensitive to temperature. Scientists are now beginning to explore how climate change will affect the subnivium, as well as the species that depend on it. At first glance, warmer winters seem beneficial for species that have difficulty surviving subzero temperatures; however, as with most ecological phenomena, the consequences are not so straightforward. Research has shown that the snow season (the period when snow is more likely than rain) has become shorter since 1970. When rain falls on snow, it increases the density of the snow and reduces its insulative capacity. Therefore, even though winters are expected to become warmer overall from future climate change, the subnivium will tend to become colder and more variable with less protection from the above-ground temperatures.

The effects of a colder subnivium are complex. For example, shrubs such as crowberry and alpine azalea that grow along the forest floor tend to block the wind and so retain higher depths of snow around them. This captured snow helps to keep soils insulated and in turn increases plant decomposition and nutrient release. In field experiments, researchers removed a portion of the snow cover to investigate the importance of the subnivium's insulation. They found that soil frost in the snow-free area resulted in damage to plant roots and sometimes even the death of the plant.

Question 7

The purpose of this passage is to

- A) introduce readers to a relatively unknown ecosystem: the subnivium
- B) explain how the subnivium works to provide shelter and food to several species.
- C) outline the effects of climate change on the subnivium.
- D) draw an analogy between the effect of blankets on humans and of snow cover on species living in the subnivium.

Question 8

All of the following statements are true EXCEPT

- A) Snow depth and snow density both influence the stability of the subnivium.
- B) Climate change has some positive effects on the subnivium.
- C) The subnivium maintains a steady temperature that can be 30 to 40 degrees warmer than the winter air temperature.
- D) Researchers have established the adverse effects of dwindling snow cover on the subnivium.

Question 9

Based on this extract, the author would support which one of the following actions?

- A) The use of snow machines in winter to ensure snow cover of at least eight inches.
- B) Government action to curb climate change.
- C) Adding nutrients to the soil in winter.
- D) Planting more shrubs in areas of short snow season.

Question 10

In paragraph 6, the author provides examples of crowberry and alpine azalea to demonstrate that

- A) Despite frigid temperatures, several species survive in temperate and Arctic regions.
- B) Due to frigid temperatures in the temperate and Arctic regions, plant species that survive tend to be shrubs rather than trees.
- C) The crowberry and alpine azalea are abundant in temperate and Arctic regions.
- D) The stability of the subnivium depends on several interrelated factors, including shrubs on the forest floor.

Question 11

Which one of the following statements can be inferred from the passage?

- A) In an ecosystem, altering any one element has a ripple effect on all others.
- B) Climate change affects temperate and Arctic regions more than equatorial or arid ones.
- C) A compact layer of wool is warmer than a similarly compact layer of goose down.
- D) The loss of the subnivium, while tragic, will affect only temperate and Arctic regions.

Question 12

In paragraph 1, the author uses blankets as a device to

- A) evoke the bitter cold of winter in the minds of readers.
 - B) explain how blankets work to keep us warm.
 - C) draw an analogy between blankets and the snowpack.
 - D) alert readers to the fatal effects of excessive exposure to the cold.
-

If necessary, be ready to change track

Paragraph 1

As outlined in the previous post, the best approach is to go from paragraph to questions. So what do you see as soon as you move to the questions after reading the first paragraph? The first three questions are not related to the first paragraph and also not related to any specific paragraph.

Does this mean that you will abandon the whole approach just because it does not apply to one passage? Absolutely not. Go ahead and look at the rest of the questions

The last question is related to Paragraph 1 and is a free gift.

Why does the author give the example of blankets?

To show that snowpack does for animals what blankets for human beings. The only option that has both subnivium and snowpack is option C!

Going through the questions you would have seen that the only other specific question is related to para 6, all the rest are based on the whole passage. So you can drop going from para to question until you reach para 6, which anyway is the last paragraph.

Since are no questions pertaining to a single paragraph, you are left with no option but to read the whole passage before moving to the questions.

It does make sense to write short one-liners for each para — para content outline — as you move ahead just to keep track.

- **What is subnivium?**
- **What does subnivium do?**
- **Why is subnivium important?**
- **How is subnivium formed?**
- **How climate change will affect negatively subnivium?**
- **Effects of a colder subnivium due to climate change**

Question 7

To answer primary purpose questions it is always useful to look at the para content outline we made above and analyze the same — four paras about subnivium and two about the climate change and subnivium.

So the two protagonists of this passage are subnivium and climate change. The primary purpose thus must have both of these protagonists.

Options A, B, and D are ruled out, leaving us with only C.

Question 8

This is a detail question and it makes sense to check the relevant para to verify the information. Everything EXCEPT B is stated. Another way to eliminate — can climate change ever have any positive effect in general? Hence, B!

Question 9

Since the author is talking about the importance of subnivium and the large-scale impacts of climate change on the same, he or she would support steps to prevent climate change — all the rest of the options cure the symptoms but not the disease — making option B the right answer.

Question 10

The beginning of the paragraph itself says that the effects of the colder subnivium are complex and then talks about the role played by shrubs and how the decomposition of shrubs releases nutrients.

The example of shrubs is used to support the argument that the effects of the colder subnivium are complex.

Only one option has both the words subnivium and shrubs in it, option D! The word complex has been paraphrased as several unrelated factors.

Question 11

An inference question that is based on the whole passage. In case you forgot, always choose rejection over selection.

Option A cannot be rejected since it says everything is inter-related, which is what the passage is saying — climate change to subnivium to shrubs to nutrients. So keep option A.

Option B is incorrect since we do not have any information about other regions.

Option C will be a rocket since you might be coming across the term since “goose down” for the first time! Move to the next option.

Option D cannot be inferred since there is no information about the effect on other regions.

You have two options A and C. Since you do not understand C and cannot reject A, you can either mark A or leave the question. Remember you have already got 15 marks in fairly quick time. So do you want to break your head or waste time over goose down? Nope.

The question-maker should have given some thought to the fact that the alternate meaning of the word “down” itself is something that many test-takers would have absolutely no clue about. Knowing the meaning of the word down when used a noun, should have no bearing in the determining reasoning skills for a career in management!

Down as a noun refers to the *soft, fine, fluffy feathers which form the first covering of a young bird or an insulating layer below the contour feathers of an adult bird*.

The fourth paragraph says that low-density snow is warmer. So which one is less dense wool or goose down? Goose down, and hence it will be warmer, making C incorrect and A correct.

PASSAGE 3, 526 words

The end of the age of the internal combustion engine is in sight. There are small signs everywhere: the shift to hybrid vehicles is already underway among manufacturers. Volvo has announced it will make no purely petrol-engined cars after 2019 and Tesla has just started selling its first electric car aimed squarely at the middle classes: the Tesla 3 sells for \$35,000 in the US, and 400,000 people have put down a small, refundable deposit towards one. Several thousand have already taken delivery, and the company hopes to sell half a million more next year. This is a remarkable figure for a machine with a fairly short-range and a very limited number of specialized charging stations.

Some of it reflects the remarkable abilities of Elon Musk, the company's founder, as a salesman, engineer, and a man able to get the most out his factory workers and the governments he deals with. Mr. Musk is selling a dream that the world wants to believe in.

This last may be the most important factor in the story. The private car is a device of immense practical help and economic significance but at the same time a theatre for myths of unattainable self-fulfillment. The one thing you will never see in a car advertisement is traffic, even though that is the element in which drivers spend their lives. Every single driver in a traffic jam is trying to escape from it, yet it is the inevitable consequence of mass car ownership.

The sleek and swift electric car is at one level merely the most contemporary fantasy of autonomy and power. But it might also disrupt our exterior landscapes nearly as much as the fossil fuel-engined car did in the last century. Electrical cars would, of course, pollute far less than fossil fuel-driven ones; instead of oil reserves, the rarest materials for batteries would make undeserving despots and their dynasties fantastically rich. Petrol stations would disappear. The air in cities would once more be breathable and their streets as quiet as those of Venice. This isn't an unmixed good. Cars that were as silent as bicycles would still be as dangerous as they are now to anyone they hit without audible warning.

The dream goes further than that. The electric cars of the future will be so thoroughly equipped with sensors and reaction mechanisms that they will never hit anyone. Just as brakes don't let you skid today, the steering wheel of tomorrow will swerve you away from danger before you have even noticed it. This is where the fantasy of autonomy comes full circle.

The logical outcome of cars which need no driver is that they will become cars which need no owner either. Instead, they will work as taxis do, summoned at will but only for the journeys we actually need. This is the future towards which Uber is working. The ultimate development of the private car will be to reinvent public transport. Traffic jams will be abolished only when the private car becomes a public utility. What then will happen to our fantasies of independence? We'll all have to take to electrically powered bicycles.

Question 13

Which of the following statements best reflects the author's argument?

- A) Hybrid and electric vehicles signal the end of the age of internal combustion engines.
- B) Elon Musk is a remarkably gifted salesman.
- C) The private car represents an unattainable myth of independence.
- D) The future Uber car will be environmentally friendlier than even the Tesla.

Question 14

The author points out all of the following about electric cars EXCEPT

- A) Their reliance on rare materials for batteries will support despotic rule.
- B) They will reduce air and noise pollution.
- C) They will not decrease the number of traffic jams.
- D) They will ultimately undermine rather than further driver autonomy.

Question 15

According to the author, the main reason for Tesla's remarkable sales is that

- A) in the long run, the Tesla is more cost-effective than fossil fuel-driven cars.
- B) the US government has announced a tax subsidy for Tesla buyers.
- C) the company is rapidly upscaling the number of specialized charging stations for customer convenience.
- D) people believe in the autonomy represented by private cars.

Question 16

The author comes to the conclusion that

- A) car drivers will no longer own cars but will have to use public transport.
- B) cars will be controlled by technology that is more efficient than car drivers.
- C) car drivers dream of autonomy but the future may be public transport.
- D) electrically powered bicycles are the only way to achieve autonomy in transportation.

Question 17

In paragraphs 5 and 6, the author provides the example of Uber to argue that

- A) in the future, electric cars will be equipped with mechanisms that prevent collisions.
- B) in the future, traffic jams will not exist.
- C) in the future, the private car will be transformed into a form of public transport.
- D) in the future, Uber rides will outstrip Tesla sales.

Question 18

In paragraph 6, the author mentions electrically powered bicycles to argue that

- A) if Elon Musk were a true visionary, he would invest funds in developing electric bicycles.
 - B) our fantasies of autonomy might unexpectedly require us to consider electric bicycles.
 - C) in terms of environmental friendliness and safety, electric bicycles rather than electric cars are the future.
 - D) electric buses are the best form of public transport.
-

Getting your foot out right to the pitch of the ball

I had mentioned in the previous post that I have received a specific query quite a few times with respect to the paragraphs to question approach –

What if the answer to a question is spread out over two or three paragraphs and not a single one? And this is not the — all of the following are stated EXCEPT — type of question but a question specific to one argument.

The first paragraph and the question related to it is exactly this type. So let's dive in.

Paragraph 1

As soon as you read the first paragraph and go to the questions you will come across question 15, which is related to it but will you find the answer in it?

The last sentence of this paragraph says — This is a remarkable figure for a machine with a fairly short-range and a very limited number of specialized charging stations. The question — According to the author, the main reason for Tesla's remarkable sales is that

The sentence says why the sales figure is remarkable.

The question is asking you for the reason behind this remarkable sales figure and not why the figure is remarkable.

To suggest an analogy, if the passage is saying that it is remarkable that such a young kid scored a century on debut, the question is asking how did he manage to score such a remarkable century.

So will you find the answer in paragraph 1? Nope.

Paragraph 2

You know that paragraph 2 will take this forward and give you reasons for this remarkable figure.

The first sentence itself states that the partial reason is this. The next sentence gives another reason.

At this juncture, since the reason is not yet clear, it makes sense to read the next paragraph. Even if you go to the question and read the options you will find that none of the options have been mentioned paras 1 and 2.

Paragraph 3

This states that the most important factor for the sales has been that Mr.Musk is selling a dream. What is the dream?

The private car is a theatre for myths of unattainable self-fulfillment.

If you go back to question 15 after reading this paragraph, you should be able to answer the question by elimination.

Options A, B, and C have nothing to do with a dream that Musk is selling! They can be eliminated. You can mark option D and change the answer if the subsequent paras counter it.

Paragraph 4

The first line of this para will validate your choice of option D — The sleek and swift electric car is at one level merely the most contemporary fantasy of autonomy and power.

Para 1 introduces the question, para 2 hints at the answer, para 3 gives you the answer through rejection and para 4 finally states the answer unequivocally.

This is what I meant by getting a big stride in to get right to the pitch of the ball. Commentators use this phrase most in case of batsmen playing spinners bowling into the rough

It is not a ball to go back to; if you do you will be rapped on the pads or be bowled by the sharp turn. If you go half forward, it will sneak through bat and pad or take an edge.

The only option is to get a big stride and smother the turn from the rough.

You will have to take that big stride, read three paras, and answer the one question.

These are the kind of question that really test your faith in the process and make minor adjustments. Based on one odd question, test-takers tend to question the whole process and go back to their old methods, which never did them any good in the first place.

By now you will have seen that the remaining questions are based on paras 5 and 6 and the passage as a whole. So no point going to the questions. Also, it makes sense to read 5 and 6 together since question 17 refers to both 5 & 6 and 18 to 6 only.

Paragraph 5 and 6

Question 17 asks you the reason the author uses the Uber example. The answer is fairly direct — The private car will become public transport as stated in option C.

Question 18 is also fairly easy — we have to buy bicycles to fulfill our fantasies of autonomy.

So you already have 9 marks by going para to questions. This will happen all the time when there are 6 questions, there will be at least 3 questions that refer to specific parts.

If you read the whole passage and then went to the questions you would have answered questions in a different sequence and that might not be a pleasant experience as you will discover.

What about the remaining questions?

What is really important when going back to the leftover questions is to pick out the detail questions first and not get stuck on Summary questions such as Central Idea, Primary Purpose and Main argument, which 9 out 10 times will end up being tricky, especially if the options are going to use only 5 to 6 words!

You are better off solving questions such as *the passage states all the following EXCEPT*

So you should start with question 14.

This is again a question that to be done using the method of rejection.

Options A and B are clearly stated. It is handling options C and D that gets tricky.

Option C is stated since the author says that electric cars will not reduce traffic jams. It will result in fewer jams only when people shift from private transport to public transport. So option C is also true as per the passage. Once you have rejected three options you are left with the right option.

Some of you might still feel that option D is implied. Option D, like option C, is not a direct consequence of electric cars, it is an outcome that is possible only when there is a larger shift that happens of cars from private to public transport.

Now you have to approach the two summary questions 13 and 16.

At this point, you can take a call whether to further invest time to answer potentially tricky summary questions or collect 12 marks and exit.

The best way to answer question 13 is to take each option and see if it best reflects the passage as a whole.

What is the passage about if we want to do a para content outline?

- The remarkable sales of electric cars, especially Tesla
- The reason behind the sales of electric cars
- The reason behind the sales of electric cars
- The future imagined with implications of a switch to electric cars
- The future imagined with implications of a switch to electric cars
- The future imagined with implications of a switch to electric cars

The passage is about the reason behind the sales of the electric car and the future imagined with implications of a switch to electric cars.

- Option A refers only to the death of the IC engine and is hence incorrect.
- Option B is limited to Elon Musk
- Option C talks about the reason behind the sales of electric cars — the dream or myth of independence.
- Option D is not stated anywhere in the passage
Even if Option C is limited, by rejection it is still the best option you are left with.

The only question now left is Question 16.

This talks about a conclusion that the author has reached. Whenever it is a conclusion or inference one has to pay close attention to the wording — words like will happen, should happen etc.

Now, this is not the simplistic advice that is usually doled out — avoid extreme options. This assumes that authors will never advocate extreme options, which like all assumptions is just that — an assumption.

what I am asking you to do is to verify whether the author has made this specific claim or can it be inferred with certainty— this will happen or this should happen.

Coming to question 16,

- Option A says cars drivers will have to use public transport. The passage says that private cars might become redundant this does not mean that people have to use, they might no longer feel the need to use.
- Option B says that technology will be more efficient than drivers, the passage only says that technology can do things that are currently done by drivers not that it can do it better.
- Option C is mentioned in the last paragraph and also see that the option says may be the future, which is exactly what the passage does — imagine a possible future
- Option D can be eliminated since passage does not say that bicycles are the only way to autonomy

From both of these passages, you would have seen that going from para to questions can definitely increase your accuracy.

Another learning is that rejection is always the best option on CAT RCs when faced with a tough question.

And most importantly you have the option to leave a few questions having scored enough marks at a quick pace rather than get greedy and waste a lot of time with a few remaining tough ones.

In the next post, I will take up the two remaining passages from the second slot of CAT 2017.

How to increase your accuracy on RC – 3

In the previous two posts, we discussed 3 RCs from CAT 2017 Slot – 2 and executed a specific strategy – paragraph to questions – to solve CAT RCs that will increase your accuracy.

In this final post of this series, we will solve the two remaining passages and fine-tune the methods discussed so far.

What if there is only one paragraph?

The GMAT has over the years consistently had two long and two short passages – one para passages – in its Verbal Reasoning section.

The single paragraph RC has never appeared in the Verbal Ability section of the CAT – barring the sole passage in last year's second slot. Even Slot 1 did not have one. Suffice to say that it seems to be by accident rather than by design.

Typewriters are the epitome of a technology that has been comprehensively rendered obsolete by the digital age. The ink comes off the ribbon, they weigh a ton, and second thoughts are a disaster. But they are also personal, portable and, above all, private. Type a document and lock it away and more or less the only way anyone else can get it is if you give it to them. That is why the Russians have decided to go back to typewriters in some government offices, and why in the US, some departments have never abandoned them. Yet it is not just their resistance to algorithms and secret surveillance that keeps typewriter production lines - well one, at least - in business (the last British one closed a year ago). Nor is it only the nostalgic appeal of the metal body and the stout well-defined keys that make them popular on eBay. A typewriter demands something particular: attentiveness. By the time the paper is loaded, the ribbon tightened, the carriage returned, the spacing and the margins set, there's a big premium on hitting the right key. That means sorting out ideas, pulling together a kind of order and organising details before actually striking off. There can be no thinking on screen with a typewriter. Nor are there any easy distractions. No online shopping. No urgent emails. No Twitter. No need even for electricity - perfect for writing in a remote hideaway. The thinking process is accompanied by the encouraging clack of keys, and the ratchet of the carriage return. Ping!

Question 19 Which one of the following best describes what the passage is trying to do? A) It describes why people continue to use typewriters even in the digital age. B) It argues that typewriters will continue to be used even though they are an obsolete technology. C) It highlights the personal benefits of using typewriters. D) It shows that computers offer fewer options than typewriters.

Question 20 According to the passage, some governments still use typewriters because: A) they do not want to abandon old technologies that may be useful in the future. B) they want to ensure that typewriter production lines remain in business. C) they like the nostalgic appeal of typewriter. D) they can control who reads the document.

Question 21 The writer praises typewriters for all the following reasons EXCEPT A) Unlike computers, they can only be used for typing. B) You cannot revise what you have typed on a typewriter. C) Typewriters are noisier than computers. D) Typewriters are messier to use than computers.

Now that there is only one paragraph to read, we know there is only one way to go – from the passage to the questions.

Once you go to the questions, it becomes important, as discussed in the previous post, to look at the sequence in which you have to attempt the questions. It is always advisable to finish off the detail questions first and then proceed to the summary questions.

The first question is a summary question and hence needs to be left for later.

Question 20 is a detail question that is very direct and I don't need to solve it for you to arrive at the answer as option D.

Did you notice the paraphrasing? The passage says the only way anyone can get a typewritten document is if you hand it over, which is why some governments have reverted to them.

This has been paraphrased to — they can control who reads the document.

Very often test-takers are subconsciously looking for the same wording to be used in the options, as in the passage.

This expectation tends to have two negative fallouts.

Firstly, they fall for trap options that use the phrasing from the passage but tweak the logic. Secondly, they tend to, at first glance, quickly reject the correct option since it uses different words. So ensure that you are reading for logic and not for phrasing.

Question 21 takes paraphrasing to a new level and hence can become tricky. But any tricky question can become easy if you go by rejection.

- The author clearly says that when typing there are no distractions and lists them out. This has been paraphrased to — they can't be used for anything other than typing. So this can be rejected since it is an EXCEPT question.
- Option B has been clearly stated that since you can't revise you have to be attentive to what you type. So this can be rejected since it is an EXCEPT question.
- Option C is tricky. Does the author praise the noisiness of typewriters? The word/phrase that is used is “encouraging clang”, clang does mean noise and the author finds the clang encouraging. The author lists this as one of the things to like about typewriters. So this can be rejected since it is an EXCEPT question.
- The author does not mention the messiness of typewriters as one of the reasons for liking it. So this has to be your answer.

Now we can go to the summary question, which is the primary purpose question.

- Option A cannot be rejected since the passage talks about how some governments are using it for security reasons and then lists all the other positive things about typewriters
 - Option B is incorrect since the author makes no claim that typewriters will continue to be used
 - Option C is close but it talks only about the personal benefits and not the security benefits
 - Option D is incorrect since the passage is not about computers versus typewriters
- So by rejection, you are again left with the right option, in this case, A.**

If you read this passage in under 3 minutes and answered the other two questions in about 4 minutes, you will have 6 marks in about 7 minutes. If you found yourself even remotely struggling with this question then you should have asked yourself whether you want to waste time over this.

Despite their fierce reputation. Vikings may not have always been the plunderers and pillagers popular culture imagines them to be. In fact, they got their start trading in northern European markets, researchers suggest. Combs carved from animal antlers, as well as comb manufacturing waste and raw antler material has turned up at three archaeological sites in Denmark, including a medieval marketplace in the city of Ribe. A team of researchers from Denmark and the U.K. hoped to identify the species of animal to which the antlers once belonged by analyzing collagen proteins in the samples and comparing them across the animal kingdom, Laura Geggel reports for LiveScience. Somewhat surprisingly, molecular analysis of the artifacts revealed that some combs and other material had been carved from reindeer antlers. Given that reindeer (*Rangifer tarandus*) don't live in Denmark, the researchers posit that it arrived on Viking ships from Norway. Antler craftsmanship, in the form of decorative combs, was part of Viking culture. Such combs served as symbols of good health, Geggel writes. The fact that the animals shed their antlers also made them easy to collect from the large herds that inhabited Norway. Since the artifacts were found in marketplace areas at each site it's more likely that the Norsemen came to trade rather than pillage. Most of the artifacts also date to the 780s, but some are as old as 725. That predates the beginning of Viking raids on Great Britain by about 70 years. (Traditionally, the so-called "Viking Age" began with these raids in 793 and ended with the Norman conquest of Great Britain in 1066.) Archaeologists had suspected that the Vikings had experience with long maritime voyages [that] might have preceded their raiding days. Beyond Norway, these combs would have been a popular industry in Scandinavia as well. It's possible that the antler combs represent a larger trade network, where the Norsemen supplied raw material to craftsmen in Denmark and elsewhere.

Question 22 The primary purpose of the passage is A) to explain the presence of reindeer antler combs in Denmark. B) to contradict the widely-accepted beginning date for the Viking Age in Britain, and propose an alternate one. C) to challenge the popular perception of Vikings as raiders by using evidence that suggests their early trade relations with Europe. D) to argue that besides being violent pillagers, Vikings were also skilled craftsmen and efficient traders.

Question 23 The evidence - "Most of the artifacts also date to the 780s, but some are as old as 725" - has been used in the passage to argue that: A) the beginning date of the Viking Age should be changed from 793 to 725. B) the Viking raids started as early as 725. C) some of the antler artifacts found in Denmark and Great Britain could have come from Scandinavia. D) the Vikings' trade relations with Europe pre-dates the Viking raids.

Question 24 All of the following hold true for Vikings EXCEPT A) Vikings brought reindeer from Norway to Denmark for trade purposes. B) Before becoming the raiders of northern Europe, Vikings had trade relations with European nations. C) Antler combs, regarded by the Vikings as a symbol of good health, were part of the Viking culture. D) Vikings, once upon a time, had trade relations with Denmark and Scandinavia.

Once you read the first two paragraphs you will see there are no questions on both of them.

The first specific question you will encounter will be question 23 which is based on the third paragraph.

This question is like a CR question and the answer to this is option D. The presence of artifacts 70 years before the raids is used to highlight the argument that trade relations began before the raids.

We are now left with question 24 and question 22.

As discussed, always move from detail to summary questions and you should approach the last question.

Option A is not mentioned and hence is the answer since this is an EXCEPT question. The passage says that Vikings might have brought raw material to make combs from Norway to Denmark. The question-maker cleverly slips in the reindeer instead of raw material.

The summary question again is best solved by elimination.

The passage is about the image of Vikings — they are not the fierce pillagers that they are considered to be.

Based on this you can eliminate options A and B since they do not mention or refer to the popular perception, image or view of Vikings

Between C and D, the latter says — besides being violent pillagers. This means that the author supports or acknowledges the fact that Vikings were violent pillagers. The author nowhere states this.

Whenever you are caught between two options, always look for ways to reject.

Is this all there is to it?

The three posts might make it seem as if RC on the CAT is terribly easy. They might make you wonder if it is so simple, then why do I keep scoring such low percentiles on the SimCATs. Are IMS SimCATs unreasonably tough? But if they are easy then, those who are currently scoring higher than you will score still higher than you and in percentile terms, things will not change.

Well, this is what I have to say about it.

IMS SimCATs are made deliberately tougher for two reasons.

Exam pressure or pressure of the D-Day makes easy questions seem medium and medium ones seem difficult.

So even if you encounter moderate stuff on CAT day, it will seem tougher due to exam pressure. We might as well give you that experience beforehand.

One thing that is for certain though is the language and complexity of arguments on the CAT RC passages will be easier than that on the SimCATs.

But no, this is not all that is there to it. The para to questions approach will increase your accuracy on detail questions and improve your ability to navigate through the passage. But it still does not cover the big skill required to master RC.

One of the skills you need to master is to never lose track of what the passage is primarily about. This you should be able to spot in the first two paragraphs.

The really good readers

- subconsciously follow the thread of the argument as it builds up to, supports or elaborates on the main argument
-
- they do not need to take notes to do the same
- know that all sentences are not equal and vary their reading speed accordingly
-
- they do not read all passages and parts of the passages at the same speed and vary it according to the content
Writing and making notes can make the whole process of solving an RC way longer than it should be. What is a better way?

Pause after each paragraph and ask yourself what is the main idea that this passage is obsessed with and plant that into your head using the fewest words possible.

If you can master this skill and execute the paragraphs to question strategy then you will see your RC scores shoot up.

And don't forget the cardinal rules — rejection over selection, and if you can't make up your mind between two options walk away before it is too late.

CAT 2017: How to increase your DI-LR percentile – Part I

After the previous post a few of you had commented saying that you are eagerly awaiting the post on the DI-LR section. The earnestness is understandable since most of you who are facing the SimCATs will know that the DI-LR section is one that will make or break your CAT.

If it goes well, you will take that confidence into the QA section finish strong. If your performance on the DI-LR section goes south then you will start feeling the fatigue of 120 minutes of testing and will fade away in the last section. The latter was the case with most test-takers last year.

The CAT 2016 DI and LR sets were tougher than the sets on CAT 2015 and as tough as the ones on 2014.

As a paper the CAT has always been fun to take because of the inventiveness of questions. Some of the best CAT papers — 2005-2008 — were a treat (not from everyone's perspective) because of the high quality of the questions posed. For us test-prep professionals taking the paper-based test in December was like the culmination of a year of work; the calendar year kinda ended with the CAT. I still remember coming out of CAT 2006 and thinking about the awesome Erdos Number LR set and not resting till I solved it fully. The CAT Day would end after all of us had agreed on all the answers — something that never fully happened with the VA-RC section — before putting it out for students and waiting for the Official Answer Key.

Since the test went paper-based in 2009 that sort of post-test excitement has disappeared. Not just that, the level of the paper dropped drastically as well — especially QA, DI and LR — since they had to make 40 different papers.

It was since 2014, from when it being conducted in fewer slots, that the DI and LR sections returned to a level that could be called CAT-level.

Going by the last three CATs and the overall tilt of the IIMs towards making the test an even playing field for aspirants from all backgrounds, it is likely that the trend of keeping the QA easy and the DI-LR tough will continue. They need to level the playing the field but not the level of intelligence!

So this post will be geared towards helping you fine tune your strategy and ability with respect to the DI-LR section. We will start with strategy and then move on to the specific handling of sets.

The first step is to select the right sets across DI and LR

Of all the skills that tested on the CAT, the ones that almost essential or indispensable to a business manager or leader are the ability to interpret data and the ability to reason. So it goes without saying that you do not have a choice between liking one or the other because it is not a question of clearing a test but the question of your very suitability for the program and career you are choosing!

So the first rule — you cannot have a favourite between the two.

Your job is to choose the right sets irrespective of whether they belong to DI or LR. On one test it can be 4 DI, 2 LR on another it can be 1 DI, 4 LR — you choose as per the paper but not as per preset rules. There is a difference between playing preset tunes on an electronic keyboard and actually playing the keyboard.

So this straight-away eliminates the problem of how to allocate your 60 minutes. You scan all the sets and choose the 4 easiest ones to start with and then pick two more if the time and the level of difficulty permit.

This is very important in the context of the current nature of DI-LR sets.

The tougher the DI-LR section gets the harder it will be for you to say where DI ends and where LR begins, the lines between the two get really, really blurred. So you will be better off setting your goal to be to choose and do 5-6 sets among 8 sets in 30 minutes.

Let's take a look at the DI-LR Sets in SimCAT 2, which had a DI-LR sectional cut-off of 21, to see how this choosing is best done.

How to choose the right DI and LR sets

Before we jump into the DI-LR sets of SimCAT 2, we should define a few terms for ourselves.

Standard Set versus Unique Set

We know what standard sets mean — these are the staple of most LR section — Linear Arrangements, Matrix Arrangements and the most standard one of them all, the good ol' Sports Set! It goes without saying that we do not need to define what Unique Sets are.

Plugin Conditions versus Deductive Conditions

Not all conditions are alike. There are broadly two types of conditions

- **Plugin Conditions that can be directly represented in a table — *Ajay was from Bhagalpur or the Navin is not an Architect.***

- Deductive Conditions are those cannot be directly inserted into a table but will yield information when used with plugin conditions that can then be represented in a table. The deceptive conditions can be
 - purely logical in nature such as *no two players scored the same number of runs* or
 - numerical as well such as *the average weight of the five tallest people was 3 kg lower than the average of the five shortest people*
- Open Sets versus Closed Sets
- Another thing which is probably the most important thing to determine while you are reading a set is whether it is a closed or an open set.

What do I mean by an Open Set?

An Open Set is one where the set is never fully solvable or the table can never be fully completed.

There are a set of conditions based on which there can few or many possibilities, tree-diagram, and hence the questions will end up being based

- only on the information given provided, you are not expected to crack the whole set and/or
- the question itself will provide additional information — *if X is present in the group then in how many different groups can be formed* — which you have to use to arrive at the answer and/or
- questions involving inequalities or conditionalities
- answer options have CANNOT BE DETERMINED

Hence, to evaluate whether it is an open or a closed set you have to quickly browse through the questions as well.

If you have understood these classifications properly or in other words if you have been able to relate these classifications to the sets you have practiced then you will easily agree that the easiest ones will be Standard & Closed sets with Plugin Conditions.

As each of these three settings — *Standard, Plugin, Closed* starts to change the sets will get progressively harder with the toughest ones being Unique, Deductive and Open Sets.

So your first task is to read a set in under three minutes evaluate it through this lens.

Once you evaluate it you have to rate on a scale of 1 to 10 with 10 being a cakewalk set that you can solve in 5 minutes to any set that needs to be left alone being classified as 5 or below.

I know this is easier said than done but if you solve enough sets you will develop this judgment.

Let us take each of the sets from a SimCAT and do this exercise. Please read the set, evaluating and classifying it as you read, before you read my take on it.

SET 1

SET 1

The year is 1609. Spanish marauders have plundered the town of Potosi in South America and collected gemstones from there. These gemstones are sent back to Spain, which are sold in different markets of Europe. The following points are known:

- Out of the gemstones sent to Spain in a particular year, some are sold in the same year while the gemstones that remain unsold at the end of the year are sold in the following years.
- The selling price of "new" gemstones (those which are being sold in the same year that they arrive in Spain) increases by 10 Pesetas every year.
- The selling price of "old" gemstones (those which are sold in a later year to that in which they arrived) depreciates by 5 Pesetas every year with respect to their selling price in the previous year.
- For example, if the selling price of the gemstones that were sent to Spain in 1609 and sold in the same year was " X " Pesetas, then the selling price of the gemstones that were sent in 1610 and sold in 1610 was " $X + 10$ " and the selling price of those sent in 1611 and sold in 1611 was " $X + 20$ ". However, if the gemstones that were sent in 1610 were sold in 1611, then the selling price will be $X + 10 - 5 = (X + 5)$ Pesetas and if they are sold in 1612, the selling price will be $X + 5 - 5 = X$ Pesetas. This is applicable for all years.

The following table outlines some information about the number of gemstones sent to Spain and sold in the years from 1609 to 1615 (Some cells have been intentionally left blank). "—" sign in any cell indicates that all the gemstones sent to Spain in a particular year have been sold till the previous year. For example, all the gemstones sent to Spain in 1609 have been sold till the year 1612 and as a result, "—" sign appears in the first row for the years 1613, 1614 and 1615.

		Year of Sale							Total
		1609	1610	1611	1612	1613	1614	1615	
Year of sending gemstones to Spain	1609	35	30						100
	1610	X			25		15		150
	1611	X	X	70		40		15	200
	1612	X	X	X		115			250
	1613	X	X	X	X			40	300
	1614	X	X	X	X	X		80	350
	Total			125					

The following table outlines the total revenue generated in Pesetas by selling the gemstones over the years (Revenue is calculated as the sum of the products of the selling prices and the number of gemstones sold).

		Year of Sale						Total revenue generated from gemstones sent in that year
		1609	1610	1611	1612	1613	1614	
Year of sending gemstones to Spain	1609	700		50	0	0		1450
	1610	X	1500		450			3350
	1611	X	X		1750	1200	625	6675
	1612	X	X	X	6750		0	11925
	1613	X	X	X	X	8400		13700
	1614	X	X	X	X	X		15700

It is known that 60 gemstones that were sent to Spain in 1613 and 120 gemstones that were sent in 1614 were not sold till the end of 1615.

- How many gemstones were sold in 1614?
- Which year saw the maximum % increase in the total revenue generated over the previous year?
- How many gemstones sent to Spain during the years up to and including 1613 were left unsold at the end of the year 1613?
- In how many years were less than 35% of the gemstones sent to Spain sold in the same year?

While there have been sets that involve carry-over of numbers from one year to the next, at this stage of your prep you would not have seen too many of this type.

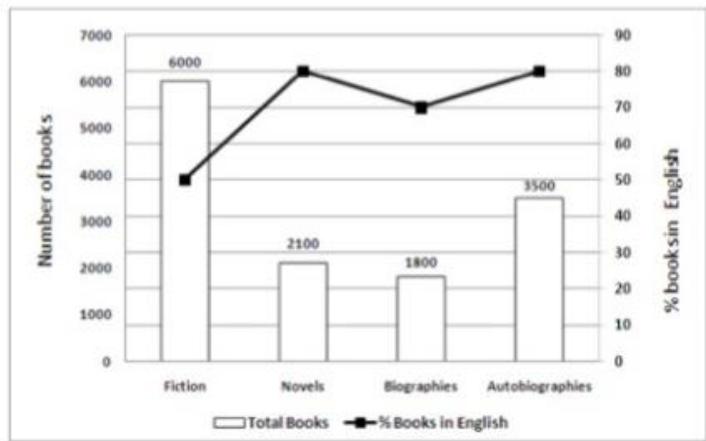
Also from the questions it is clear that it is a closed set that will need you to deduce all the missing values to answer the questions and hence definitely something that will take time.

VERDICT: Non-standard, Plugin + Deductive, Closed; RATING: 5

SET 2

SET 2

A library contains books on seven genres in English and Marathi languages: Fiction, Novels, Biographies, Autobiographies, Dramatics, Poetry and Philosophy. The following graph gives the distribution of books in English and Marathi languages on four out of the seven genres. There is at least one book in each language on each genre.



The number of books on different genres are to be read on the left hand side axis whereas the number of books in English language as % of total books in that genre is to be read on the right hand side axis.

In addition to this, the following facts are known.

1. The total number of books in Marathi is greater than the total number of books on Fiction.
2. The number of Marathi books on Philosophy is ten times the number of Marathi books on Poetry.
3. The total number of books on Autobiographies is half the total number of books on Biographies, Poetry and Philosophy taken together.
4. The total number of books on Dramatics is greater than the total number of books on any other genre but Fiction.
5. For both Biographies and Philosophy, the ratio of the number of books in English to the total number of books is the same.
6. Only 10% of the books on Poetry are in Marathi.
7. At least 50% books of any genre are in English.

1. Which of the following is the total number of books on Philosophy?
2. The number of Marathi books on Dramatics is certainly not greater than _____.
3. Which of the following statements is certainly true?
Statement I: The number of English books on Autobiographies is same as the number of English books on Philosophy
Statement II: The number of Marathi books on Dramatics is greater than 20.
4. Let $x : y$ be the ratio of the total number of books on Dramatics to the total number of books in the library. Then which of the following is certainly true?

A standard set based on arrangements, last year's CAT had an LR set that was very close to this and it was the easiest of the DI sets.

The conditions are deductive but it's simple big numbers based deductive rather than averages or ratios and also it is not a set that opens into a tree diagram.

From the questions it is clear that it is partly open but there are enough conditions given and hence worth taking a shot at.

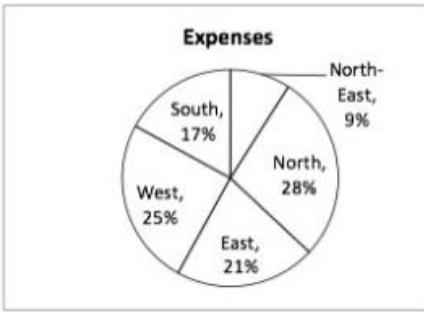
VERDICT: Standard, Plugin + Deductive, Open; RATING: 7

SET 3

SET 3

2009 was a particularly bad year for Python Enterprises, a Delhi based company that operates in the North, East, West, South and North-East regions of India. The company ended up making losses in all the five regions of India in the year 2009.

Pie chart-1 shows the break-up of the sales of the company in different regions in 2009. Similarly Pie chart-2 shows the break up of the expenses of the company in different regions in 2009.



Note:

$$\text{Profit} = \text{Sales} - \text{Expenses} \quad (\text{If Sales} > \text{Expenses})$$

$$\text{Loss} = \text{Expenses} - \text{Sales} \quad (\text{If Expenses} > \text{Sales})$$

$$\% \text{ Profit Margin} = \frac{\text{Profit}}{\text{Sales}} \times 100$$

$$\% \text{ Loss Margin} = \frac{\text{Loss}}{\text{Sales}} \times 100$$

1. Which of the following cannot be the total percent loss margin suffered by the company in India in 2009?
2. In which region did the company suffer minimum percent loss margin in 2009?
3. Additional information: In 2009, the company suffered a total loss margin of 50% in the five regions of India combined. Which of the following is not the percent loss margin suffered by the company in one of the five regions in 2009?
4. Additional information: In 2009, the company suffered a total loss margin of 50% in the five regions of India combined. The company improved its sales in the year 2010. The total expenses of the company in the year 2010 were same as that in 2009. However, exactly one region registered a break-even (the situation of zero profit/zero loss) while the other regions still registered a loss. What was the percent increase of the sales of the company in 2010 over the sales in 2009? (Assume that percent increase in sales in 2010 over 2009 was uniform across all the five regions.)

While it is Venn diagrams it is not a standard set since there are no totals or any other values given apart from percentages!

There are barely any conditions given and hence it is a numerical deduction set where your comfort with numbers and fractions will get tested.

Two questions have given additional information and hence the set is fairly open.

VERDICT: Non-standard, Deductive, Open; RATING: 6

SET 4

Again a very non-standard set with a lot of missing values. It is definitely deductive since they have given ratios from which one has to derive the numbers.

The questions are all direct which means that the set is a closed one and you might have to fill in all the numbers before you can answer and hence a potentially time-taking sets.

VERDICT: Non-standard, Deductive, Closed; RATING: 6

SET 5

SET 5

Six students, named Ajay, Bharat, Chandan, Dinesh, Gaurav and Hitesh secured 10, 20, 30, 40, 50 and 60 marks in an examination (in no particular order). Names of their fathers were Ajit, Bhushan, Chandrakant, Dattaray, Gangadhar and Hari (in no particular order). Their surnames were Aggarwal, Bhatia, Chakraborty, Dey, Ganeriwala and Hirwani (in no particular order).

For this set, the naming convention to be used is "Name- Father's Name-Surname". For example, if William is the name of the student, Jefferson is the name of his father and Clinton is his surname, the student is referred to as "William-Jefferson-Clinton".

Additionally following points were known:

1. Name, father's name and Surname of all the students started with different initials.
2. Bharat is not the son of Chandrakant and Bharat's surname is not Dey.
3. The student whose surname is Hirwani scored 20 marks more than the student whose father is Dattaray, who in turn scored 20 marks more than Ajay.
4. The student whose surname is Ganeriwala scored 20 marks more than the student whose father is Gangadhar, who in turn scored 20 marks more than Bharat.
5. Gaurav scored 40 marks more than the student whose surname is Bhatia.
6. Dinesh scored 30 marks more than the student whose surname is Aggarwal.
7. Hitesh scored 10 marks more than Chandan while the student whose father is Bhushan scored 10 more than the student whose father is Ajit.

1. What is Hitesh's surname?
2. How many marks did Bhushan's son score?
3. What is the full name of the student who scored 10 marks?
4. What is the name of Ajit's son?

SET 6

Hometowns of five friends named Abhijeet, Ajit, Arijit, Ashutosh and Avijit are five different towns named Agra, Ahmedabad, Ahmednagar, Allahabad and Amritsar (in no particular order). Each of the five friends is travelling to the hometown of one of the remaining four friends subject to following conditions:

1. Abhijeet is travelling to Avijit's hometown
2. Ashutosh is travelling to Abhijeet's hometown
3. Arijit is travelling to Ajit's hometown
4. Avijit is travelling to Ashutosh's hometown
5. Ajit is travelling to Arijit's hometown
6. Ashutosh is not travelling to Ahmedabad. His hometown is not Allahabad.
7. Neither the hometown nor the destination of Avijit is Ahmednagar.

Data recorded in a computer was corrupted and as a result, neither the hometown nor the destination of any friend was correctly mentioned in the computer data. The corrupted data recorded on the computer is as follows

Name of the friend	Hometown	Destination
Abhijeet	Ahmednagar	Agra
Ajit	Amritsar	Ahmednagar
Arijit	Agra	Amritsar
Ashutosh	Ahmedabad	Allahabad
Avijit	Allahabad	Ahmedabad

1. Which of the following statements is correct about Allahabad?
2. Which two cities are associated with Ajit (his hometown and his destination, in no specific order)?
3. What can be said about these two statements?

While it might look complicated it is still constructed along standard matrix arrangement lines.

None of the conditions can be directly plugged in, all of them have to be used to deduce information but there are enough conditions given.

All the questions are direct with no additional information given in the question; the first question has a CANNOT BE DETERMINED but since both that question and all others are direct one can safely surmise that they are selling you a dummy. So in essence it is a closed set albeit a time-taking one.

VERDICT: Standard, Deductive, Closed; RATING: 7

SET 6: In the image above

Again a very standard arrangement type of a situation that is not very far away from one's comfort zone.

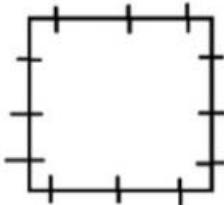
The conditions are a mixture of plugin and deductive.

The questions while asked in a non-standard way, they still indicate that it is a closed set more or less.

Also, it does not look like something that will not take a lot of time since it is only 5 people and 5 cities.

VERDICT: Standard, Plugin + Deductive, Closed; RATING: 7**SET 7****SET 7**

Arvind, Bijoy, Charu, Dinanath, Ehsaan, Farid, Gaurav, Hari, Isaac, Jayendra, Kisan and Laxman are 12 friends who are seated (all facing inwards) along a square-shaped table having three equidistant chairs along each side, as shown below:



Following points are known:

- Arvind, Ehsaan, Charu and Jayendra are seated along the four different sides of the table such that the number of friends between Arvind & Ehsaan, Ehsaan & Charu, Charu & Jayendra and Jayendra & Arvind are equal. None of them is occupying the middle seat along any side of the table.
 - Farid and Hari are seated farthest from each other in both clockwise and anticlockwise directions. Similarly, Bijoy and Gaurav are seated farthest from each other in both clockwise and anticlockwise directions.
 - Kisan and Laxman are directly facing each other. Similarly Dinanath and Isaac are directly facing
1. Who among the following cannot be seated next to Arvind (not necessarily along the same side of the table)?
 2. Which of the following pairs of friends cannot be seated facing each other?
 3. If Kisan is sitting adjacent and to the left of Jayendra, who sits to the immediate right of Gaurav?
 4. If Charu, Laxman and Hari are sitting along the same side of the table, who among the following definitely sit along one other side of the table?

SET 8

In Imperial College of Engineering, Delhi, a committee of 6 professors is to be formed to design the syllabus of Non-Engineering subjects. The requirement is that exactly two professors each from Physics, Chemistry and Mathematics departments must be the members of the committee. Following is the list of professors who are eligible to be selected to the committee:

DEPARTMENT	PROFESSOR
Physics	A, B, C, D
Chemistry	L, M, N, O
Mathematics	P, Q, R, S

The committee is to be formed subject to the following conditions:

- If A is selected, S must be selected and vice-versa.
 - Both C and P must not be selected simultaneously.
 - Exactly two of B, N and R must be selected.
 - If D is selected, Q must be selected.
 - If A is not selected, O must be selected.
1. If both B and C are selected, in how many different ways can the other members of the committee be selected?
 2. If both N and O are selected, in how many different ways can the other members of the committee be selected?
 3. If both P and R are selected, in how many different ways can the other members of the committee be selected?
 4. If both A and L are selected, in how many different ways can the other members of the committee be selected?

While it is similar to a circular arrangement it is still fairly non-standard.

The conditions are all deductive since specific positions are not given but only relative positions.

The questions have additional information and hence it is definitely an open set with many possibilities. While the set itself is not difficult it might be time-taking and has scope for silly mistakes.

VERDICT: Non-standard, Deductive, Open; RATING: 6**SET 8: In the image above**

A very standard set with if then conditionals that are all plugin types but the questions are essentially open.

Each question has a condition given based on which the possibilities narrow down.

While the fact that the questions look like P&C might make it scary, the fact there is no need to structure or represent the data makes it less time-taking. A set that you might be tempted to leave at face value because of the TITA factor as well but with permutation and combination it does not make a difference if it is TITA or not!

VERDICT: Non-standard, Deductive, Open; RATING: 7

You should make a list of the ratings for each set on your scrap paper so that you can have it handy.

SET 1: Non-standard, Plugin + Deductive, Closed; RATING: 5

SET 2: Standard, Plugin + Deductive, Open; RATING: 7

SET 3: Non-standard, Deductive, Open; RATING: 6

SET 4: Non-standard, Deductive, Closed; RATING: 6

SET 5: Standard, Plugin + Deductive, Closed; RATING: 7

SET 6: Standard, Plugin + Deductive, Open; RATING: 7

SET 7: Non-standard, Deductive, Open; RATING: 6

SET 8: Standard, Plugin, Open; RATING: 7

Some of you might rate sets differently based on your own capabilities, which is absolutely fine provided the set matches your estimate of it when you solve it.

Ideally you should not jump into any set without having seen all the sets. It might seem time-consuming but this time is more likely to result in marks at the end of the section rather than jumping into a set and getting stuck for 15-20 minutes.

Only if you rate a set 8 or above should you try to go for it straightaway.

One of the things that you need to remember about the CAT is that if it's tough for you it's tough for everyone else and the cut-off will be lower than usual. So do not be perturbed by the fact if you find most of the sets in a particular test to be tough.

How will gauge the overall toughness? By doing such an exercise for all sets.

If half of more of the sets are below 7, then is definitely not an easy section.

In this paper there are only 4 sets at 7 and none above it. If there were a few sets that were 8, then it would mean that you will have time left to take a shot at a few 6s but that is not the case.

So you know that you need to buckle down and get as close as possible to answering 4 sets correctly.

Also you will know by now that you have a match on your hands, given the highly deductive nature of all the conditions and that you have to concentrate hard to ensure a good accuracy, which will be key.

So in this SimCAT if you managed to solve sets 2, 5, 6 and 8 you will have cleared the cut-off, which was 21, very easily.

A few DON'Ts in terms of how to evaluate a set:

- do not assume a set is easy because it has a simple pie-chart or table
- do not assume a set is hard because it has a big table
- do not assume a set is hard because it has more than 1 table or chart
- do not assume every sports set is easy and hence something you should play

We will take up a few of the above sets for discussion to see how you can take your DI-LR ability the next level.

Think about how to represent the data on your paper

The first and most crucial task to decide how you are going to represent your data. For this you need to first view this exercise in the right perspective.

What do you want to achieve by representing the data?

- Most test-takers think representation is about somehow getting all the data from the screen to the paper!

With this mindset they end up doing a LEVEL ZERO representation.

What is a LEVEL ZERO representation?

Your table chart or whatever format you choose is a direct representation of the information given. It is not drawn in such a way that the output of your representation is the answer to the questions asked.

You should not try to cram everything into your representation. What happens as a result you find yourself at a loss to put in all the data, especially when there are many variables. You should try to represent it in such a way that when you complete your table it will give you the answers to the question.

So draw a table that will help you enter your inferences rather than one that will help you only enter existing data!

This is best illustrated by the first set I would attempt among the shortlisted sets, which is SET 6, since it seems to be the least time-taking.

SET 5

Six students, named Ajay, Bharat, Chandan, Dinesh, Gaurav and Hitesh secured 10, 20, 30, 40, 50 and 60 marks in an examination (in no particular order). Names of their fathers were Ajit, Bhushan, Chandrakant, Dattaray, Gangadhar and Hari (in no particular order). Their surnames were Aggarwal, Bhatia, Chakraborty, Dey, Ganeriwala and Hirwani (in no particular order).

For this set, the naming convention to be used is "Name- Father's Name- Surname". For example, if William is the name of the student, Jefferson is the name of his father and Clinton is his surname, the student is referred to as "William-Jefferson-Clinton".

Additionally following points were known:

- Name, father's name and Surname of all the students started with different initials.
 - Bharat is not the son of Chandrakant and Bharat's surname is not Dey.
 - The student whose surname is Hirwani scored 20 marks more than the student whose father is Dattaray, who in turn scored 20 marks more than Ajay.
 - The student whose surname is Ganeriwala scored 20 marks more than the student whose father is Gangadhar, who in turn scored 20 marks more than Bharat.
 - Gaurav scored 40 marks more than the student whose surname is Bhatia.
 - Dinesh scored 30 marks more than the student whose surname is Aggarwal.
 - Hitesh scored 10 marks more than Chandan while the student whose father is Bhushan scored 10 more than the student whose father is Ajit.
-
- What is Hitesh's surname?
 - How many marks did Bhushan's son score?
 - What is the full name of the student who scored 10 marks?
 - What is the name of Ajit's son?

SET 6

Hometowns of five friends named Abhijeet, Ajit, Arijit, Ashutosh and Avijit are five different towns named Agra, Ahmedabad, Ahmednagar, Allahabad and Amritsar (in no particular order). Each of the five friends is travelling to the hometown of one of the remaining four friends subject to following conditions:

- Abhijeet is travelling to Avijit's hometown
- Ashutosh is travelling to Abhijeet's hometown
- Arijit is travelling to Ajit's hometown
- Avijit is travelling to Ashutosh's hometown
- Ajit is travelling to Arijit's hometown
- Ashutosh is not travelling to Ahmedabad. His hometown is not Allahabad.
- Neither the hometown nor the destination of Avijit is Ahmednagar.

Data recorded in a computer was corrupted and as a result, neither the hometown nor the destination of any friend was correctly mentioned in the computer data. The corrupted data recorded on the computer is as follows

Name of the friend	Hometown	Destination
Abhijeet	Ahmednagar	Agra
Ajit	Amritsar	Ahmednagar
Arijit	Agra	Amritsar
Ashutosh	Ahmedabad	Allahabad
Avijit	Allahabad	Ahmedabad

- Which of the following statements is correct about Allahabad?
- Which two cities are associated with Ajit (his hometown and his destination, in no specific order)?
- What can be said about these two statements?

If you have not done this set, you should take a shot at it now.

On the face of it seems like a three variables set — Trip-Home-Destination, but is it really so?

Let's talk our way through the process:

- one man's destination is another man's home
- since we know every man's destination in terms of friend's name, all we need to know is everyone's home town.

Since they have given you all the five trips the standard response might be to make a two by two table with names of people on both sides and then try to fill up the names of the places:

	AB	AS	AR	AV	AJ
AB					
AS					
AR					
AV					
AJ					

Another response might be to make separate tables or columns for home and destination but do you need separate columns for both. As discussed knowing one is knowing the other?

What is the most optimum representation?

Since you already know the trips, Abhijeet to Avijit's hometown, and the unknown is the destination, are you not better off to having the five places as one of the axis and the trips as the other? So what is the best way to represent?

Write the trips on one side and the cities on the other.

	AG	AH	AN	AL	AM
AB - AV					
AS - AB					
AR - AJ					
AV - AS					
AJ - AR					

You map the first name of the trip to the hometown using crosses and ticks based on the information that is given in the conditions and in the table as incorrect.

Since every guy can have only one home town, every row and column can have only one tick, so if there are four crosses the other one has to be tick and if there is a tick the others have to crosses.

So based on the information, your table should look like this. The only possible banana skin is the confusion between Ahmedabad and Ahmednagar!

	AG	AH	AN	AL	AM
AB - AV	✗	✗	✗	✗	
AS - AB	✗	✗	✗	✓	
AR - AJ	✗		✗	✓	
AV - AS	✗		✗	✗	
AJ - AR	✗	✗	✓	✗	✗

The key to this set as is the case with most sets is finding the right representation at the beginning.

How to ensure that you structure and represent the data optimally

- **Do not start writing or transferring data from the screen as you read**
- **The first lines in a set often contain preliminary information that introduces the set.**
- **If you straightaway start making a table you will be starting with the least important or lower-order information — a list of names and cities etc**
- **Once you reach the important information, the conditions that are given and the deductions that need to be made, you will be subordinating them to the structure of the lower-order information**
- **You will then try your hand at solving it and usually end up re-drawing the set**
- **Once you finish reading think about the best way to draw based on the conditions given (not the initial information) and the things you need to determine**

This is a small but often overlooked aspect of aptitude testing. Test-takers spend very little time thinking about how to solve — they are usually reading and writing in auto-pilot mode , with very little pure thinking time between the two.

It might seem like a waste of time but a couple of minutes spent thinking, which will always seem like an eternity, will save you 10-15 minutes spent in solving sets twice!

Think of the structuring an LR set as similar to preparing the plan of a building – one does not start assembling the bricks to build a structure without a plan.

All conditions are not equal

The next set we can look at same is SET 5.

SET 5

Six students, named Ajay, Bharat, Chandan, Dinesh, Gaurav and Hitesh secured 10, 20, 30, 40, 50 and 60 marks in an examination (in no particular order). Names of their fathers were Ajit, Bhushan, Chandrakant, Dattaray, Gangadhar and Hari (in no particular order). Their surnames were Aggarwal, Bhatia, Chakraborty, Dey, Ganeriwala and Hirwani (in no particular order).

For this set, the naming convention to be used is "Name- Father's Name- Surname". For example, if William is the name of the student, Jefferson is the name of his father and Clinton is his surname, the student is referred to as "William-Jefferson-Clinton".

Additionally following points were known:

1. Name, father's name and Surname of all the students started with different initials.
2. Bharat is not the son of Chandrakant and Bharat's surname is not Dey.
3. The student whose surname is Hirwani scored 20 marks more than the student whose father is Dattaray, who in turn scored 20 marks more than Ajay.
4. The student whose surname is Ganeriwala scored 20 marks more than the student whose father is Gangadhar, who in turn scored 20 marks more than Bharat.
5. Gaurav scored 40 marks more than the student whose surname is Bhatia.
6. Dinesh scored 30 marks more than the student whose surname is Aggarwal.
7. Hitesh scored 10 marks more than Chandan while the student whose father is Bhushan scored 10 more than the student whose father is Ajit.

1. What is Hitesh's surname?
2. How many marks did Bhushan's son score?
3. What is the full name of the student who scored 10 marks?
4. What is the name of Ajit's son?

SET 6

Hometowns of five friends named Abhijeet, Ajit, Arijit, Ashutosh and Avijit are five different towns named Agra, Ahmedabad, Ahmednagar, Allahabad and Amritsar (in no particular order). Each of the five friends is travelling to the hometown of one of the remaining four friends subject to following conditions:

1. Abhijeet is travelling to Avijit's hometown
2. Ashutosh is travelling to Abhijeet's hometown
3. Arijit is travelling to Ajit's hometown
4. Avijit is travelling to Ashutosh's hometown
5. Ajit is travelling to Arijit's hometown
6. Ashutosh is not travelling to Ahmedabad. His hometown is not Allahabad.
7. Neither the hometown nor the destination of Avijit is Ahmednagar.

Data recorded in a computer was corrupted and as a result, neither the hometown nor the destination of any friend was correctly mentioned in the computer data. The corrupted data recorded on the computer is as follows

Name of the friend	Hometown	Destination
Abhijeet	Ahmednagar	Agra
Ajit	Amritsar	Ahmednagar
Arijit	Agra	Amritsar
Ashutosh	Ahmedabad	Allahabad
Avijit	Allahabad	Ahmedabad

1. Which of the following statements is correct about Allahabad?
2. Which two cities are associated with Ajit (his hometown and his destination, in no specific order)?
3. What can be said about these two statements?

One of the keys to effective representation is to not to always view it as a matrix, especially when there are many things to map as is the case with this SET.

When faced with such a set, try to visualise the representation as a set of rows in the final format that you want the data.

What do you want in this case for each guy?

MARKS, NAME, FATHER's NAME, SURNAME.

What is fixed are the MARKS, so write it left most and do your deductions and keep entering the names, father's names and surnames next to each mark.

While this set might seem tough there is a long list of conditions given and as we evaluated earlier it is a closed set, so it can be cracked provided you are methodical.

When solving LR sets, especially when dealing with conditions test-takers tend to gravitate towards the easy conditions, the plugin type and leave out the deductive conditions. They then waste time trying to complete the set without having deduced anything from the tricky conditions.

All conditions are not made equal, the tougher conditions are the anchor conditions that will help you crack the whole set. They are there for a reason and the reason is not for you to ignore them!

In this set what are the anchor conditions?

Conditions 3 and 4 are the anchor conditions that you need to use in conjunction with the other conditions.

When you read such conditions do not be passive, consciously try to deduce the implications.

- The student whose surname is Hirwani scored 20 marks more than the student whose father is Dattatreya, who in turn scored 20 marks more than Ajay ($H > D > A$)
 - The student whose surname is Ganeriwala scored 20 marks more than the student whose father is Gangadhar, who in turn scored 20 marks more than Bharat ($G > G > B$)
- Hirwani and Ganeriwala are both higher than Ajay and Bharat respectively by 40 marks.
- If they are greater by 40 marks then they have to score either 50 or 60 since the lowest score is 10 and the highest is 60.
 - Condition 5 says that Gaurav scores 40 more than someone so, he too must have a score of 50 or 60.
 - So his surname must be either Hirwani or Ganeriwala, it cannot be the latter since it will start with the same letter, G, so it has to be Gaurav Hirwani at 50 or 60.

The best way to crack open the set is to take Gaurav Hirwani at 50 and see if you are able to complete the set with the remaining conditions, else he has to be at 60.

This is how the set will look once completed.

10	Ajay	Chandrekant	Bhatia
20	Bharat	Hari	Chakraborty
30	Chandan	Dattatreya	Agarwal
40	Hitesh	Gangadhar	Dey
50	Gaurav	Ajit	Hirwani
60	Dinesh	Blushan	Ganeriwala

The key is to ensure that you are always circulating through all conditions looking for conditions you have left unused. Oftentimes, it happens that test-takers forget the first condition or a condition that is a second half of another one. So as a process keep going through all conditions as you are proceeding with the set.

Remember at every stage of solving it is the unused condition that will lead you to completely cracking the set.

This post is already quite long. So it best we take a break here and look at the remaining to-do sets of SimCAT 2 and my favourite CAT LR set of all time in the next post!

CAT 2017: How to improve your DI-LR percentile – Part II

In the [previous post](#) we covered the Dos and Don'ts of representing or structuring data and how to prioritise conditions.

In this post we will take a look at the type of reasoning sets that pose major challenges to the average test-taker.

Be ready for Numerical and Algebraic Reasoning

When test-takers say they are finding a DI or LR a set tough, what they mean is that they are not seeing the following in the sets they encounter:

- closed DI sets around pie-charts, graphs, tables
 - LR sets around arrangements with simple plugin conditions
- What stumps most people is sets are that NOT direct calculation and NOT direct arrangement.

These sets are usually, Open Sets, which we defined in the previous post, that blur the line between DI and LR and require you to be able to venture into territory beyond what is typical DI and LR — numerical & algebraic reasoning.

In Numerical Reasoning sets you have to test out the various numbers that a particular variable, say production in a particular month, can take given the conditions. The only way you can is proceed by listing, testing & eliminating possibilities given the conditions, making the solving of these sets very similar to the solving of Sudoku.

In sets that involve Algebraic Reasoning sets, at some point you have to take one unknown value to be X and then use the conditions to write the other values in terms of X and use the conditions to determine things about X:

- The precise value of X or
 - The maximum and minimum values it can take
- The key to cracking such sets is to be open to two things:

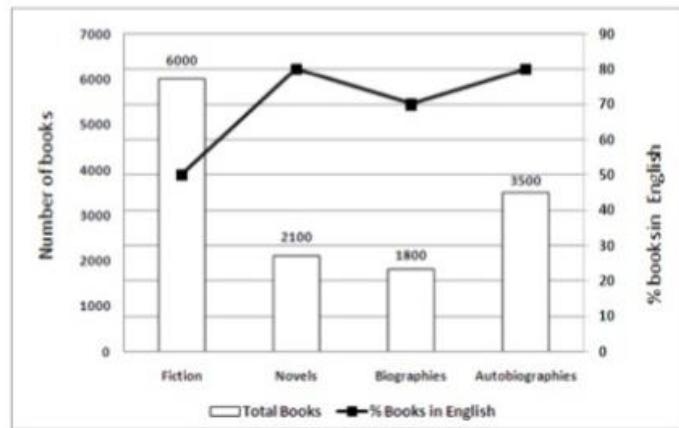
- the use of algebra or Sudoku style reasoning
- the possibility that the set will remain open even after solving and questions might not be direct but those involve that ranges or inequalities

Once you have changed your outlook and are willing to explore these non-standard lines of reasoning and explore the use of algebra you will take your DI-LR skills to the next level.

Let's take a DI set from a SimCAT that we had classified as a must-solve.

SET 2

A library contains books on seven genres in English and Marathi languages: Fiction, Novels, Biographies, Autobiographies, Dramatics, Poetry and Philosophy. The following graph gives the distribution of books in English and Marathi languages on four out of the seven genres. There is at least one book in each language on each genre.



The number of books on different genres are to be read on the left hand side axis whereas the number of books in English language as % of total books in that genre is to be read on the right hand side axis.

In addition to this, the following facts are known.

1. The total number of books in Marathi is greater than the total number of books on Fiction.
2. The number of Marathi books on Philosophy is ten times the number of Marathi books on Poetry.
3. The total number of books on Autobiographies is half the total number of books on Biographies, Poetry and Philosophy taken together.
4. The total number of books on Dramatics is greater than the total number of books on any other genre but Fiction.
5. For both Biographies and Philosophy, the ratio of the number of books in English to the total number of books is the same.
6. Only 10% of the books on Poetry are in Marathi.
7. At least 50% books of any genre are in English.

1. Which of the following is the total number of books on Philosophy?
2. The number of Marathi books on Dramatics is certainly not greater than _____.
3. Which of the following statements is certainly true?
Statement I: The number of English books on Autobiographies is same as the number of English books on Philosophy
Statement II: The number of Marathi books on Dramatics is greater than 20.
4. Let $x : y$ be the ratio of the total number of books on Dramatics to the total number of books in the library. Then which of the following is certainly true?

The only thing you need to crack this is to use algebra and be comfortable with the set remaining open after the solving.

$$\begin{array}{cccc}
 & E & M & T \\
 F & 3000 & 3000 & 6000 \\
 N & 1680 & 420 & 2100 \\
 B & 1260 & 340 & 1860 \\
 AD & 2800 & 700 & 3500 \\
 \\
 D & & & \\
 PO & 9x & x & \\
 PH & \frac{90x}{3} & 10x & \\
 \\
 AB = & \underline{B + PO + PH} & & \\
 & 2. & & \\
 PO + PH = & 5200 & & \\
 x = 120 & & &
 \end{array}$$

Once you use the basic conditions and take one of the values as X, your representation should look like this.

Once you calculate the value of X and fill in the remaining values the table should look like this.

	E	m	T
F	3000	3000	6000
N	1680	420	2100
B	1260	540	1800
AD	2800	700	3500
D			$\boxed{< 6000}$ > 4000
PO	9x	x	1200
PH	$\frac{20x}{3}$	10x	4000
$AB = \underbrace{B + PO + PH}_{2}$			
$PO + PH = 5200$			
$x = 120$			

From here on you should be able to answer all the questions correctly by just ensuring that you read what being asked for properly without being in a hurry to rush to the next set.

Decoding my favourite CAT LR set of all time

As I mentioned in my previous post my favourite LR set is from CAT 2006 – The Erdös Number set. Before I wax eloquent about it, go ahead read the set and give it a solid try. **Mathematicians are assigned a number called Erdös number, (named after the famous mathematician, Paul Erdös). Only Paul Erdös himself has an Erdös number of zero. Any mathematician who has written a research paper with Erdös has an Erdös**

number of 1. For other mathematicians, the calculation of his/her Erdös number is illustrated below:

Suppose that a mathematician X has co-authored papers with several other mathematicians. From among them, mathematician Y has the smallest Erdös number. Let the Erdös number of Y be y.

Then X has an Erdös number of $y + 1$. Hence any mathematician with no co-authorship chain connected to Erdös has an Erdös number of infinity.

In a seven day long mini-conference organized in memory of Paul Erdös, a close group of eight mathematicians, call them A, B, C, D, E, F, G and H, discussed some research problems.

- **At the beginning of the conference, A was the only participant who had an infinite Erdös number.**
 - **Nobody had an Erdös number less than that of F.**
 - **On the third day of the conference F co-authored a paper jointly with A and C. This reduced the average Erdös number of the group of eight mathematicians to 3. The Erdös numbers of B, D, E, G and H remained unchanged with the writing of this paper. Further, no other co-authorship among any three members would have reduced the average Erdös number of the group of eight to as low as 3.**
 - **At the end of the third day, five members of this group had identical Erdös numbers while the other three had Erdös numbers distinct from each other.**
 - **On the fifth day, E co-authored a paper with F which reduced the group's average Erdös number by 0.5. The Erdös numbers of the remaining six were unchanged with the writing of this paper.**
 - **No other paper was written during the conference.**
- What makes this set so unique?**

- The concept is absolutely novel in the context of CAT Logical Reasoning Sets — something that is not remotely related to anything that one has seen before.
- There is no table and hence one has to really give thought about how to represent the data.
- Not a single condition is a plugin condition, every single condition is a deductive condition.
- It is an open set and not a closed set.

After solving it in 2006, recently I tried to solve this again, albeit with a small challenge that I set myself — to solve this completely without putting pen on paper.

So here is how one can go about logically breaking open this set.

- **No one had an Erdos number lower than F so we can take his Erdos number as X and proceed since he is the only one who authored papers with the others during the conference**
- **When he authors papers with A and C, on the 3rd day, their Erdos numbers become $X+1$ and $X+1$**
- **When he does this the average of the group comes down to 3. So the total of the group becomes 24, since there are 8 people in the group.**
- **When he authors a paper with E, on the 5th day, the average of the group comes down by 0.5, which means that the total decreases by 4 (average from 3 to 2.5 so total from 24 to 20, or directly by multiplying the decrease, 0.5, with 8)**
- **This decrease is only due to the decrease in the Erdos number of E after writing a paper with F since no other papers were written.**
- **After writing a paper with F his Erdos number of E would have become $X + 1$, since it decreased by 4, before writing it should have been $X + 5$.**

So now we have some of the values for each of these days.

After Day 3 we know that

$$A = X + 1, C = X + 1, E = X + 5, F = X; \text{TOTAL} = 24$$

After Day 5

$$A = X + 1, C = X + 1, E = X + 1, F = X; \text{TOTAL} = 20$$

- We also know that at the end of Day 3 five of people had the same Erdos number that means five of the values were the same.
- We know 4 values and we do not know 4 values, B, D, G, H
- What can be the equal value?
- It has to be among the three values we know, X, X+1 or X+5 since there are only 4 values we don't know and there are 5 equal values.
- Also we know that apart from the equal values all the remaining three values are different, so 5 equal values, 3 different values.
- So the equal value has to be X+1, other wise the apart from the five equal values, there will be two X + 1's, the values of A and C.
- So the values we now know at the end of Day 3 are X, X+1, X+1, X+1, X+1, X+1, X + 5 and one unknown value.
- The total at the end of the Day 3 is 24. So $7x + 10 + \text{Unknown Value} = 24$, or $7x + \text{Unknown Value} = 14$, hence X has to be 1 since unknown value cannot be 0 or a negative value
- If X is 1 then the Unknown value is 7.
- The values of A and C are 2 and E is 6 to begin with and changes to 2 on the 5th day.
- The catch is that we do not know who has the Erdos number of 7

Now you can answer the set.

The person having the largest Erdös number at the end of the conference must have had Erdös number (at that time):

- (1) 5
- (2) 7
- (3) 9
- (4) 14
- (5) 15

How many participants in the conference did not change their Erdös number during the conference?

- (1) 2
- (2) 3
- (3) 4
- (4) 5
- (5) Cannot be determined

The Erdös number of E at the beginning of the conference was:

- (1) 2
- (2) 5
- (3) 6
- (4) 7

(5) Cannot be determined

How many participants had the same Erdös number at the beginning of the conference?

- (1) 5
 - (2) 8
 - (3) 2
 - (4) 3
 - (5) Cannot be determined
-

If you see it has all the atypical qualities of tough LRs – the need to use algebra and at some point the need to test and eliminate numbers ($7X + \text{Unknown} = 14$). But you also realise that if you are open to viewing the set for what it is and do not expect it to yield to you automatically, you can solve the set.

The best part about this set is that it is based on a true story!

Paul Erdos is famous, eccentric mathematician who believed that mathematics is a social activity and hence always co-authored or rather solved mathematical problems with his friends and the Erdos number was instituted by his friends as a homage to him. You should read up the Wiki Entry on him, here is an excerpt from the same.

Possessions meant little to Erdős; most of his belongings would fit in a suitcase, as dictated by his itinerant lifestyle. Awards and other earnings were generally donated to people in need and various worthy causes. He spent most of his life as a vagabond, traveling between scientific conferences, universities and the homes of colleagues all over the world. He earned enough in stipends from universities as a guest lecturer, and from various mathematical awards to fund his travels and basic needs; money left over he used to fund cash prizes for proofs of “Erdős problems”. He would typically show up at a colleague’s doorstep and announce “my brain is open”, staying long enough to collaborate on a few papers before moving on a few days later. In many cases, he would ask the current collaborator about whom to visit next.
Another roof, another proof – Paul Erdos

Let's keep our brains open!

How to crack the DI-LR section of the CAT – 1

Just like I keep getting queries on how to increase RC accuracy, despite the Last Mile To CAT sessions, I keep getting queries around the DI-LR section as well.

Given the great response that the RC posts got, I thought I'll dive really deep down into the DI-LR sets of CAT 2017 and see if I can come up with some kernel of truth beyond just the solving of the set that can help aspirants approach the solving of the sets better. I am not going to take up the selection of the sets in these set of posts — I have already done that in these previous posts, [here](#) and [here](#). So if you do not know the process to select you should first look at these posts.

I am going to solely focus on

- solving these sets cleanly
 - bringing out the reason why these sets seem tougher than usual
 - highlighting the skills or the logical reasoning chops you need to strengthen and
 - the ways to do the same
-

The Pizza Set

Funky Pizzaria was required to supply pizzas to three different parties. The total number of pizzas it had to deliver was 800, 70% of which were to be delivered to Party 3 and the rest equally divided between Party 1 and Party 2.

Pizzas could be of Thin Crust (T) or Deep Dish (D) variety and come in either Normal Cheese (NC) or Extra Cheese (EC) versions. Hence, there are four types of pizzas: T-NC, T-EC, D-NC and D-EC. Partial information about proportions of T and NC pizzas ordered by the three parties is given below:

	Thin Crust (T)	Normal Cheese (NC)
Party 1	0.6	
Party 2	0.55	0.3
Party 3		0.65
Total	0.375	0.52

Q.1) How many Thin Crust pizzas were to be delivered to Party 3?

1. 398
2. 162
3. 196
4. 364

Q.2) How many Normal Cheese pizzas were required to be delivered to Party 1?

1. 104
2. 84
3. 16
4. 196

Q.3) For Party 2 if 50% of the Normal Cheese pizzas were of Thin Crust variety, what was the difference between the numbers of T-EC and D-EC pizzas to be delivered to Party 2?

1. 18
2. 12
3. 30
4. 24

Q.4) Suppose that a T-NC pizza cost as much as a D-NC pizza, but $\frac{3}{5}$ th of the price of a D-EC pizza. A D-EC pizza costs Rs. 50 more than a T-EC pizza and the latter costs Rs. 500. If 25% of the Normal Cheese pizzas delivered to Party 1 were of Deep Dish variety, what was the total bill for Party 1?

1. Rs. 59480
2. Rs. 59840
3. Rs. 42520
4. Rs. 45240

How to process the information

As I read the set I can see that they have given how many pizzas were delivered to each of the three parties — so I know the totals of the rows.

I can also calculate the totals of the columns — the number of TC and number of NC. Only two cells are missing and at this point and they can be calculated in a trice. It is important to look at the questions at this point — once the understanding of the set is done.

The first two questions are asking for the two missing values.

Also, the moment I look at the values — .375 and 800 — I know that the calculation is easy. If you do not see this then before you ask anyone else how to improve your DI-LR scores, you need to fix this — your number crunching skills.

So you know that you can pocket 6 marks in about 6 minutes easily. So I would rate this set an 8 out of 10.

To take you through the process of solving this set, I decided to record a video of the solving so that you can see how to use the paper effectively to solve cleanly and also get a fair idea of how the numbers should be broken down during calculation.

The Electives Confusion

There were seven elective courses - E1 to E7 - running in a specific term in a college. Each of the 300 students enrolled had chosen just one elective from among these seven. However, before the start of the term, E7 was withdrawn as the instructor concerned had left the college. The students who had opted for E7 were allowed to join any of the remaining electives. Also, the students who had chosen other electives were given one chance to change their choice. The table below captures the movement of the students from one elective to another during this process. Movement from one elective to the same elective simply means no movement. Some numbers in the table got accidentally erased; however, it is known that these were either 0 or 1.

		To Elective					
		E1	E2	E3	E4	E5	E6
From Elective	E1	9	5	10	1	4	2
	E2		34	8		2	2
	E3	2	6	25			2
	E4		3	2	14		4
	E5		5			30	
	E6		7	3		2	9
	E7	4	16	30	5	5	41

Further, the following are known:

1. Before the change process there were 6 more students in E1 than in E4, but after the reshuffle, the number of students in E4 was 3 more than that in E1.
2. The number of students in E2 increased by 30 after the change process.
3. Before the change process, E4 had 2 more students than E6, while E2 had 10 more students than E3.

Q.5) How many elective courses among E1 to E6 had a decrease in their enrollments after the change process?

1. 4
2. 1
3. 2
4. 3

Q.6) After the change process, which of the following is the correct sequence of the number of students in the six electives E1 to E6?

1. 19, 76, 79, 21, 45, 60
2. 19, 76, 78, 22, 45, 60
3. 18, 76, 79, 23, 43, 61
4. 18, 76, 79, 21, 45, 61

Q.7) After the change process, which course among E1 to E6 had the largest change in its enrollment as a percentage of its original enrollment?

1. E1
2. E2
3. E3
4. E6

Q.8) Later, the college imposed a condition that if after the change of electives, the enrollment in any elective (other than E7) dropped to less than 20 students, all the students who had left that course will be required to re-enroll for that elective. Which of the following is a correct sequence of electives in decreasing order of their final enrollments?

1. E2, E3, E6, E5, E1, E4

- 2. E₃, E₂, E₆, E₅, E₄, E₁**
- 3. E₂, E₅, E₃, E₁, E₄, E₆**
- 4. E₂, E₃, E₅, E₆, E₁, E₃**

Definitely a heavier set

This set is definitely tougher to understand than the previous one. As far as the table goes

- there are a lot of missing values and**
 - the values have to be reasoned out and not calculated like the previous set**
- If you look at the questions as well, you can see that there is a scope of making silly mistakes and if one has to tread carefully, one will end up taking a lot of time.**

I will rate this a 6 out of 10.

It will be a set I will come back to only if I have no other sets rated above 7.

The Old Woman and her Wealth

An old woman had the following assets:

- (a) Rs. 70 lakh in bank deposits
- (b) 1 house worth Rs. 50 lakh
- (c) 3 flats, each worth Rs. 30 lakh
- (d) Certain number of gold coins, each worth Rs. 1 lakh

She wanted to distribute her assets among her three children; Neeta, Seeta, and Geeta. The house, any of the flats or any of the coins were not to be split. That is, the house went entirely to one child; a flat went to one child and similarly, a gold coin went to one child.

Q.9) Among the three, Neeta received the least amount in bank deposits, while Geeta received the highest. The value of the assets was distributed equally among the children, as were the gold coins. How much did Seeta receive in bank deposits (in lakhs of rupees)?

- 1. 30**
- 2. 40**
- 3. 20**
- 4. 10**

Q.10) Among the three, Neeta received the least amount in bank deposits, while Geeta received the highest. The value of the assets was distributed equally among the children, as were the gold coins. How many flats did Neeta receive?

Enter your response (as an integer) using the virtual keyboard.

Q.11) The value of the assets distributed among Neeta, Seeta and Geeta was in the ratio of 1:2:3, while the gold coins were distributed among them in the ratio of 2:3:4. One child got all three flats and she did not get the house. One child, other than Geeta, got Rs. 30 lakh in bank deposits. How many gold coins did the old woman have?

- 1. 72**
- 2. 90**
- 3. 180**
- 4. 216**

Q.12) The value of the assets distributed among Neeta, Seeta and Geeta was in the ratio of 1:2:3, while the gold coins were distributed among them in the ratio of 2:3:4. One child got all three flats

and she did not get the house. One child, other than Geeta, got Rs. 30 lakh in bank deposits. How much did Geeta get in bank deposits (in lakhs of rupees)?

Enter your response (as an integer) using the virtual keyboard.

Seems easy but unfamiliar

This set seems easy at first glance since the data is fairly straightforward. This is for those who have read the previous posts on DI-LR a classic example of Non-Standard-Plugin-Open Set.

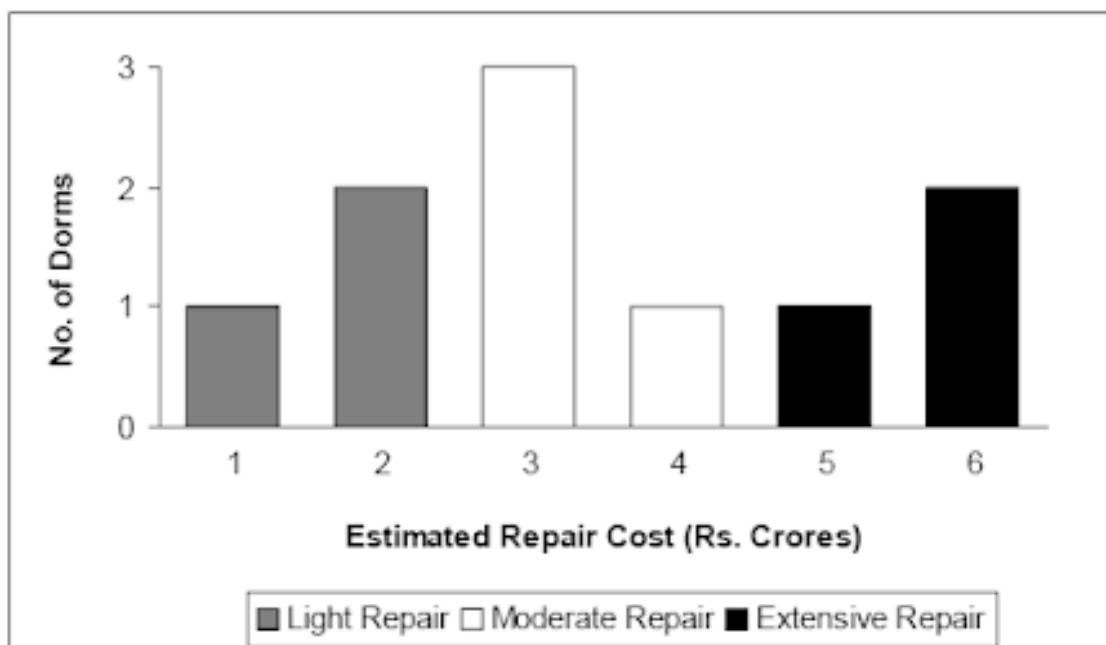
If you take a look at the questions you will find that 1 & 2 have the same data and ask for different information. This means that if you solve 1, you get the answer to 2 as well and the same applies to 3 & 4.

The information for 1 and 2 is simple, all wealth and all coins are divided equally, so the situation is simple enough to execute. But the information for 3 and 4 is complex and you wouldn't want to get into it.

So I would rate this 7 out of 10, do only the first two questions to get 6 marks in about 4 minutes and exit the set. This is how I would go about doing it.

The Dormitory Set

At a management school, the oldest 10 dorms, numbered 1 to 10, need to be repaired urgently. The following diagram represents the estimated repair costs (in Rs. Crores) for the 10 dorms. For any dorm, the estimated repair cost (in Rs. Crores) is an integer. Repairs with estimated cost Rs. 1 or 2 Crores are considered light repairs, repairs with estimated cost Rs. 3 or 4 crores are considered moderate repairs and repairs with estimated cost Rs. 5 or 6 Crores are considered extensive repairs.



Further, the following are known:

- Odd-numbered dorms do not need light repair; even-numbered dorms do not need moderate repair and dorms, whose numbers are divisible by 3, do not need extensive repair.
- Dorms 4 to 9 all need different repair costs, with Dorm 7 needing the maximum and Dorm 8 needing the minimum.

Q.13) Which of the following is NOT necessarily true?

- Dorm 1 needs a moderate repair
- Dorm 5 repair will cost no more than Rs. 4 Crores
- Dorm 7 needs an extensive repair
- Dorm 10 repair will cost no more than Rs. 4 Crores

Q.14) What is the total cost of repairing the odd-numbered dorms (in Rs. Crores)?

Enter your response (as an integer) using the virtual keyboard.

Further information for questions 15 and 16:

- 4 of the 10 dorms needing repair are women's dorms and need a total of Rs. 20 Crores for repair.
- Only one of Dorms 1 to 5 is a women's dorm.

Q 15) What is the cost for repairing Dorm 9 (in Rs. Crores)?

Enter your response (as an integer) using the virtual keyboard.

Q 16) Which of the following is a women's dorm?

- Dorm
- Dorm
- Dorm
- Dorm 10

In terms of information, this set does not have too many complications. The tricky part is that unlike the first set where the representation was a simple table. This set cannot be represented as simplistically. You need to find out the best way to represent the data.

From the wording of the first question — which of the following is not necessarily true — you will realize that you will not be able to fix all the rooms and all the costs. Some rooms will remain unallocated since the phrase is not necessarily and hence may be true.

I will rate this set 7 out of 10.

The first trick is to represent this properly. I don't think what I have come up with is the best method but this worked for me.

A Cup of Tea

A tea taster was assigned to rate teas from six different locations – Munnar, Wayanad, Ooty, Darjeeling, Assam, and Himachal. These teas were placed in six cups, numbered 1 to 6, not necessarily in the same order. The tea taster was asked to rate these teas on the strength of their flavor on a scale of 1 to 10. He gave a unique integer rating to each tea. Some other information is given below:

1. Cup 6 contained tea from Himachal.
2. Tea from Ooty got the highest rating, but it was not in Cup 3.
3. The rating of tea in Cup 3 was double the rating of the tea in Cup 5.
4. Only two cups got ratings in even numbers.
5. Cup 2 got the minimum rating and this rating was an even number.
6. Tea in Cup 3 got a higher rating than that in Cup 1.
7. The rating of tea from Wayanad was more than the rating of tea from Munnar but less than that from Assam.

Q.17) What was the second highest rating given?

Enter your response (as an integer) using the virtual keyboard.

Q.18) What was the number of the cup that contained tea from Ooty?

Enter your response (as an integer) using the virtual keyboard.

Q.19) If the tea from Munnar did not get the minimum rating, what was the rating of the tea from Wayanad?

1. 3
2. 5
3. 1
4. 6

Q.20) If cups containing teas from Wayanad and Ooty had consecutive numbers, which of the following statements may be true?

1. Cup 5 contains tea from Assam
2. Cup 1 contains tea from Darjeeling
3. Tea from Wayanad got a rating of 6
4. Darjeeling Tea got the minimum rating

This is the first set that seems to follow the typical format of a Logical Reasoning Set. Three variables and not a lot of conditions. But is it that simple?

There is more to this set than meets the eye if you read the conditions properly.

While the set is straightforward, 6 out of 7 conditions are deductive and only one is a plugin condition (please read the previous [two posts](#) on DI-LR to know what I mean by a plugin and a deductive condition)

So, you should be a bit wary about this set and not jump into it before the Pizza Set.

I would rate it a 7.5 out of 10.

Let us look at how you should have gone about solving this set in the least possible amount of time.

The Queen Of Chess

In an 8×8 chessboard a queen placed anywhere can attack another piece if the piece is present in the same row, or in the same column or in any diagonal position in any possible 4 directions, provided there is no other piece in between in the path from the queen to that piece.

The columns are labeled a to h (left to right) and the rows are numbered 1 to 8 (bottom to top). The position of a piece is given by the combination of column and row labels. For example, position c5 means that the piece is in the cth column and 5th row.

Q.21) If the queen is at c5, and the other pieces at positions c2, g1, g3, g5 and a3, how many are under attack by the queen? There are no other pieces on the board.

1. 2
2. 3
3. 4
4. 5

Q.22) If the other pieces are only at positions a1, a3, b4, d7, h7, and h8, then which of the following positions of the queen results in the maximum number of pieces being under attack?

1. f8
2. a7
3. c1
4. d3

Q.23) If the other pieces are only at positions a1, a3, b4, d7, h7, and h8, then from how many positions the queen cannot attack any of the pieces?

1. 0
2. 3
3. 4
4. 6

Q.24) Suppose the queen is the only piece on the board and it is at position d5. In how many positions can another piece be placed on the board such that it is safe from attack from the queen?

1. 32
2. 35
3. 36
4. 37

This is the easiest set of the lot. Those who know chess will not even have to read the description you will go straightaway to the set.

I would rate this an 8 out of 10 since there is no ambiguity whatsoever and all one needs to do is put one's head down and draw properly to collect 12 marks in 12 minutes.

Choosing the right set is key

From this and from my previous posts you would have seen that choosing the right set is key.

An unwisely chosen set can mean getting stuck for 20 minutes and wasting another 18 months of your life at another CAT attempt.

So while you might think you are following the steps outlined in the previous posts, you might still be doing it superficially since you want to save time and get to the solving.

But the key is to look deeper when you look. It boils down to operating at higher levels of concentration. It is the difference between spending 30 seconds and viewing the surface of the question and spending 45 seconds and seeing through to the bottom of it.

A simple example would be how one evaluates the *A Cup of Tea* set.

In the next post, I will solve the two sets that are left and answer the big questions —

- **What is making these CAT DI-LR sets unique or different from traditional sets?**
- **What is the unique skill that these DI-LR sets are testing?**
- **Do they test a specific kind of reasoning that makes most students uncomfortable?**
- **How do you develop this kind of reasoning?**

Keep prepping.

How to crack the DI-LR section of the CAT – 2

In the [previous post](#), we took up 6 of the 8 sets from the DI-LR section CAT 2017 Slot 2 and took a call on which ones solve and also looked at the best way of solving the same. In this post, we will look at the remaining two sets and also what is making the DI-LR sections on recent CATs unique.

It's no longer DI-LR but Math-LR!

One of the things I like to do when I teach is to show students the inner workings of the machine that is a question or a set. As the old adage goes, one should teach people to fish rather than give them fish. To do that one should first know more about fish than about fishing!

So I took a lot of time looking at these DI-LR sets, trying to figure out why they are creating problems for test-takers.

In cricket, we often have mystery bowlers springing up on to the scene who in a short span of time wreak havoc on batsmen of all stripes, most of them also disappear suddenly — the Lankan spinner Ajantha Mendis epitomized this phenomenon.

Why do they cause so much destruction? Because they defy expectation and test a different kind of skill or mindset that most batsmen take time to figure out.

The DI-LR sets have been defying the two expectations that test-takers have come to expect when they hear the word DI-LR — calculation and reasoning.

All of you know by now that calculation in the classical sense of breaking numbers down has come down. But what most test-takers haven't seen is that reasoning in the classical sense has also disappeared.

When we think reasoning we think of it in terms of solving puzzles.

But if we take a look at all the sets, barring The Pizza Set, on the DI-LR section of CAT 2017 Slot 2, they have moved to a new area — Mathematical Reasoning or reasoning in a Math context.

What do I mean by this?

If we can think of an LR set as an equation where the variables are on the LHS and the conditions are on the RHS, earlier the RHS was pure logical constraint, now the RHS is a number!

The LHS has always been the various possibilities and using the RHS we eliminated possibilities.

When the RHS becomes a number, the LHS also becomes a series of numerical possibilities!

Let us look at the sets to get a fair idea:

The Old Woman and her Wealth

The amount of 210 lakhs had to be divided equally and hence the RHS becomes 70 each. Now you have to try out different number combinations, eliminate the ones that contradict conditions and arrive at the answer. This is how we solved the first two questions in the set, we eliminated numbers.

What about questions 3 and 4 in that set?

Q.11) The value of the assets distributed among Neeta, Seeta and Geeta was in the ratio of 1:2:3, while the gold coins were distributed among them in the ratio of 2:3:4. One child got all three flats and she did not get the house. One child, other than Geeta, got Rs. 30 lakh in bank deposits. How many gold coins did the old woman have?

Q.12) The value of the assets distributed among Neeta, Seeta and Geeta was in the ratio of 1:2:3, while the gold coins were distributed among them in the ratio of 2:3:4. One child got all three flats and she did not get the house. One child, other than Geeta, got Rs. 30 lakh in bank deposits. How much did Geeta get in bank deposits (in lakhs of rupees)?

It is so obvious that they are purely Arithmetic questions!

There is no way anyone can argue that the two questions cannot be part of the QA section. Just because a question is long does not mean that it becomes an LR question.

The Dormitory Set

The first two questions were pure LR questions but what about the next two?

1. 4 of the 10 dorms needing repair are women's dorms and need a total of Rs. 20 Crores for repair.
2. Only one of Dorms 1 to 5 is a women's dorm.

Q 15) What is the cost for repairing Dorm 9 (in Rs. Crores)?

Q 16) Which of the following is a women's dorm?

20 Crores has to be divided into 4 dorms and the numbers available are 1, 2, 3, 4, 5 and 6.

Only those with a good grasp of averages can see that since the maximum number you have is 6, you have to first give as many 5s and 6s as possible.

This again pushes the set into the realm of Math LR.

The Cup of Tea

This is a simple set but the anchor condition gives you a set of 5 pairs of numbers of which you have to eliminate 4 using other numerical conditions.

None of these sets were pure LR sets that did not involve numbers.

The two sets that are left will illustrate even more clearly the concept of Math-LR set.

The Airplane Seating

Eight friends: Ajit, Byomkesh, Gargi, Jayanta, Kikira, Manik, Prodosh and Tapesh are going to Delhi from Kolkata by a flight operated by Cheap Air. In the flight, sitting is arranged in 30 rows, numbered 1 to 30, each consisting of 6 seats, marked by letters A to F from left to right, respectively. Seats A to C, are to the left of the aisle (the passage running from the front of the aircraft to the back), and seats D to F, are to the right of the aisle. Seats A and F are by the windows and referred to as Window seats, C and D are by the aisle and are referred to as Aisle seats while B and E are referred to as Middle seats. Seats marked by consecutive letters are called consecutive seats (or seats next to each other). A seat number is a combination of the row number, followed by the letter indicating the position in the row; e.g., 1A is the left window seat in the first row, while 12E is the right middle seat in the 12th row.

Cheap Air charges Rs. 1000 extra for any seats in Rows 1, 12 and 13 as those have extra legroom. For Rows 2-10, it charges Rs. 300 extra for Window seats and Rs. 500 extra for Aisle seats. For Rows 11 and 14 to 20, it charges Rs. 200 extra for Window seats and Rs. 400 extra for Aisle seats. All other seats are available at no extra charge.

The following are known:

1. *The eight friends were seated in six different rows.*
 2. *They occupied 3 Window seats, 4 Aisle seats, and 1 Middle seat.*
 3. *Seven of them had to pay extra amounts, totaling to Rs. 4600, for their choices of seats. One of them did not pay any additional amount for his/her choice of seat.*
 4. *Jayanta, Ajit, and Byomkesh were sitting in seats marked by the same letter, in consecutive rows in increasing order of row numbers; but all of them paid different amounts for their choices of seats. One of these amounts may be zero.*
 5. *Gargi was sitting next to Kikira, and Manik was sitting next to Jayanta.*
 6. *Prodosh and Tapesh were sitting in seats marked by the same letter, in consecutive rows in increasing order of row numbers; but they paid different amounts for their choices of seats. One of these amounts may be zero.*
- Look at the anchor condition — it's purely a mathematical condition.**

Just like 210 lakhs, and 20 crores in the previous sets, in this one, it is 4600.

You have to divide 4600 among 7 people using the numbers, 1000, 500, 400, 300 and 200.

The biggest mistake that test-takers can make while solving this set is to start by trying to arrange people into seats.

As in if you start with the arrangement and then try to fit the Math into it. Nothing can lead you to waste more time and get stuck than this. And if this set came right at the beginning for you then you have had it.

What you need to do is to start by changing your mindset — put the Math before the LR. The way Aravinda De Silva, for example, was very successful against Anil Kumble because he did not treat him like a spinner but like a medium-pacer.

How do you go about putting the Math first?

4600 divided by 7 means an average of around 650. Since the average is closer to 500 than to 1000 there will be more 500s and under than 1000s. So more 500s than 1000s out of 7 means the division can be 4-3 or 5-2. It is always best to test the boundary conditions, that is the lower side first.

Can you have two 1000s? If you have two 1000s then the balance is 2600 over 5 people making the average over 500. If the maximum value is 500 then you cannot have an average of over 500!

So it has to be three 1000s.

Once you have three 1000s how can you make the remaining 1600 using 4 numbers?

- **Option 1 – 500, 500, 400, 200**
- **Option 2 – 500, 500, 300, 300**
- **Option 3 – 400, 400, 400, 400**

The next big condition says that you have three people in consecutive seats with 3 different prices, so they are either 3 different aisles or three different windows.

So the only combinations can be 1000, 500, 400 or 1000, 300, 200.

This straightway eliminates options 2 and 3.

Once you do this the rest of the set opens up easily.

- **4 Aisle, 3 Windows and 1 middle**
- **You need 3 seats with same letters and 2 seats with same letters with different numbers**
- **You have 1000 (A/W), 1000 (1000A/W), 1000 (A/W), 500 (A), 500 (A), 400 (A) and 200(W)**
- **Since you have only two different values for Windows – 1000 and 200 – it has to be 3 consecutive Aisles and 2 Consecutive Windows.**
- **If you have 2 consecutive windows but only one value of 200, then it means that one guy paid and the other had a seat that**
- **wasn't chargeable and was immediately after the paid 200 seat.**
- **200s are from 14 to 20, so the two consecutive seats have to be 20W and 21W, Prodosh and Tapesh**
- **The three consecutive aisle seats with different rates have to be 500, 400 and 1000 the only possible combination is 10A, 11A & 12A – Jayant (500), Ajit (400) & Byomkesh (1000) (I have used 'A' to represent an aisle and not the letter of the seat).**
- **Out of the 7 numbers you have assigned 4**
- **The three left are 1000, 1000 and 500.**
- **Two more people are next to each other and they have to be the two 1000s**
- **Manik is next to Jayanta but if he takes the middle he will be not paying anything but we already have one person who is not paying anything.**
- **So he is sitting next to Jayanta but on the aisle next to him by paying 500**
- **All 4 Aisles are done, and 2 out of 3 Windows are done and 1 middle is left.**

- So, Gargi and Kikira occupy a Window and a Middle that cost 1000 each, in either row 1 or row 13

Q.25) In which row was Manik sitting?

1. 10
2. 11
3. 12
4. 13

Q.26) How much extra did Jayanta pay for his choice of seat?

1. Rs. 300
2. Rs. 400
3. Rs. 500
4. Rs. 1000

Q.27) How much extra did Gargi pay for her choice of seat?

1. 0
2. Rs. 300
3. Rs. 400
4. Rs. 1000

Q.28) Who among the following did not pay any extra amount for his/her choice of seat?

1. Kikira
2. Manik
3. Gargi
4. Tapesh

You have all the answers and you are only left wondering who came up with the names Prodosh and Kimura!

If you see, unlike a typical LR set you can solve all the questions without drawing (This is what makes it a classic Math-LR Set.

Some of you might have cracked this set using drawing. I am not saying you should not draw but I am saying is that you should add the skill of putting Math before LR to your repertoire.

The Fingerprint Set

A high-security research lab requires the researchers to set a passkey sequence based on the scan of the five fingers of their left hands. When an employee first joins the lab, her fingers are scanned in an order of her choice, and then when she wants to re-enter the facility, she has to scan the five fingers in the same sequence.

The lab authorities are considering some relaxations of the scan order requirements since it is observed that some employees often get locked-out because they forget the sequence.

Q.29) The lab has decided to allow a variation in the sequence of scans of the five fingers so that at most two scans (out of five) are out of place. For example, if the original sequence is Thumb (T), index finger (I), middle finger (M), ring finger (R) and little finger (L) then TLMRI is also allowed, but TMRLI is not.

How many different sequences of scans are allowed for any given person's original scan?

Enter your response (as an integer) using the virtual keyboard.

For any given key if two letters can be out of place then how many ways can we choose those two letters out of 5 letters? $5C2$ or 10 pairs can be out of place and still be valid. So including the original combination, one can have 11 valid passkeys.

This entire set is built on the bedrock of P&C. It is no surprise that my colleague VK, whom most of you would have seen during the LMTC sessions or know from his website vkpedia, found this set very easy since he is a champ at P&C.

On such a DI-LR section, those who are naturally good at QA, especially the Number Systems experts should have cleared the cut-offs without much trouble. Those who are primarily good at VA-RC, Arithmetic, and LR, would have struggled or just fallen short of the cut-off.

There are no closed sets

Another feature of these sets is that none of them are closed.

- **The Pizza Set – With the given information you still do not know anything about EC or DD**
- **The Dormitory Set – You do not know where rooms 2 and 10 fit in or the specific costs of rooms, 1, 3, 5 & 9**
- **The Old Woman and her Wealth – everything is open**
- **The Chess Set – everything is open**
- **A Cup of Tea – the places of 4 cups are unknown**
- **The Airplane Seating – the rows of Gargi and Kikira or the specific seat numbers of the aisle people.**
- **The Fingerprint Set – everything is open**

It is now easy to see why these sets are causing trouble or taking a lot of time – they are Open Sets based on Math and this is the exact opposite of what test-takers like and want – Closed sets based on Arrangement.

Developing the fast-twitch muscle in the brain

One of the key requirements to be good at solving LR sets such as The Dormitory Set or even The Airplane Set is to be able to quickly list alternatives, keep moving from one condition to the other and keep eliminating options.

This is very different from LR sets where you do not have to list alternatives but only work the conditions.

I find the former skill very similar to solving Sudoku. One has to keep moving very dynamically across cells and keep arriving at the number by the process of elimination.

Even before I began solving all of these sets, I felt that I needed to get my brain warmed up and supple. I felt that I since I haven't solved LR sets in a while I would need to get

the blood pumping through the gray cells. So I did what works best for me a few Sudoku sets on my phone till I knew that I was moving absolutely smoothly without getting stuck.

My favourite batsman, Brian Lara, was known to have a net or play some TT during the breaks between innings, especially if he was in good nick and scoring fast, he just didn't want to let go of the rhythm and quick reflexes.

I would strongly advise solving 3 medium-level Sudoku sets a day targeting an average time of 4 mins per set. On every third day, you should take up a difficult set so that you push yourself a bit harder.

Don't expect sets to yield with you on auto-pilot

The brain like the body wants to be on auto-pilot mode. This means that it is traversing familiar territory and hence will execute the motions it has perfected already with considerable ease. Think of this as playing on an ODI or T20I pitch where the ball and the bowler cannot surprise you because the pitch does give them any purchase.

And what is tough is usually so because it is unique. And unique means that you cannot be on autopilot. Think of this as batting on a worsening pitch in the fourth innings — the same limited overs heroes struggle to chase down 250 in a day (it's not the format but the skill sets that have become limited, which why our Indian team manager's talk on recent international test tours about intent is doesn't translate into runs).

If you make this change in your head then you know what you are up against.

The ability to think deeply and with clarity

Chasing down a total, not just surviving, on a fourth innings pitch means that you have to concentrate hard.

The ability to think deeply means that when you read a set you are figuring out the complexity of the set and really understanding it in terms of how to represent it.

The core skill would be the ability of your brain to focus deeply and for long without getting tired or distracted.

The best way to do this by ensuring that all your prep sessions are for 3 hours with your phone switched off. If you are prepping with your phone on then I am afraid that you are doing yourself a great disservice.

I always know how likely I am to do a set correctly and in good time based on how fresh and relaxed my brain is feeling.

So one of the things that you should ensure over the next two months when you will be taking a lot of tests is that you conserve your mental energy.

While you might think that watching your favorite TV show or browsing social media for an hour or so is relaxing, it is taxing your eyes with light from the screen. I would rather suggest a nap or a walk as the ideal rest or break.

Also, do not forget to do some form of exercise regularly since it increases the oxygen supply in the system. I know of a few people for whom none of this will matter but as I said I know only a few and I am not one of them.

There is no point in looking for exactly these kind of sets to solve since you will never get mirror replicas. I would rather suggest that you resolve all the sets from the SimCATs keeping in mind the following things:

- **rate the set before solving**
 - **figure out the best way of representing instead of blindly jumping to draw something**
 - **identify the anchor conditions and learn to work with them**
 - **keep moving between conditions and eliminating instead of getting stuck in your table**
 - **identify the Math-LR sets and execute putting the Math first**
- Becoming good at something is always about doing 10 small things right. Most of the time people think it is one big thing that they lack and that couldn't be farther from the truth.**

How tough was the DI-LR on CAT 2017 Slot 1 ?

After doing two posts on Slot 2 of CAT 2017, I kind of felt in the groove to take a shot at Slot 1 as well. Was it really that tough? If one of my best friends and a beast far as cracking the CAT is concerned did not attempt all questions as is usually the case — how many can a test-taker currently scoring around 90 percentile in the SimCATs realistically attempt? How should he or she have gone about analyzing the section, in what order should the sets have been attempted? I thought I will take up these questions in this blog post so that many fears can be laid to rest.

The Fast Food Joint Set

Healthy Bites is a fast food joint serving three items: burgers, fries and ice cream. It has two employees Anish and Bani who prepare the items ordered by the clients. Preparation time is 10 minutes for a burger and 2 minutes for an order of ice cream. An employee can prepare only one of these items at a time. The fries are prepared in an automatic fryer which can prepare up to 3 portions of fries at a time and takes 5 minutes irrespective of the number of portions. The fryer does not need an employee to constantly attend to it, and we can ignore the time taken by an employee to start and stop the fryer; thus, an employee can be engaged in preparing other items while the frying is on. However, fries cannot be prepared in anticipation of future orders.

Healthy Bites wishes to serve the orders as early as possible. The individual items in any order are served as and when ready; however, the order is considered to be completely served only when all the items of that order are served.

The table below gives the orders of three clients and the times at which they placed their orders.

Client No.	Time	Order
1	10:00	1 burger, 3 portions of fries, 1 order of ice cream
2	10:05	2 portions of fries, 1 order of ice cream
3	10:07	1 burger, 1 portion of fries

Assume that only one client's order can be processed at any given point of time. So, Anish or Bani cannot start preparing a new order while a previous order is being prepared.

35. At what time is the order placed by Client 1 completely served?

1. 10:17
2. 10:10
3. 10:15
4. 10:20

36. Assume that only one client's order can be processed at any given point of time. So, Anish or Bani cannot start preparing a new order while a previous order is being prepared.

At what time is the order placed by Client 3 completely served?

1. 10:35
2. 10:22

- 3. 10:25
- 4. 10:17

37. Suppose the employees are allowed to process multiple orders at a time, but the preference would be to finish orders of clients who placed their orders earlier.

At what time is the order placed by Client 2 completely served?

- 1. 10:10
- 2. 10:12
- 3. 10:15
- 4. 10:17

38. Suppose the employees are allowed to process multiple orders at a time, but the preference would be to finish orders of clients who placed their orders earlier.

Also assume that the fourth client came in only at 10:35. Between 10:00 and 10:30, for how many minutes is exactly one of the employees idle?

- 1. 7
- 2. 10
- 3. 15
- 4. 23

If we look at this set through the Standard- Plugin-Closed lens then what do we see?

It can be termed a non-standard set since sets around the cooking of food have never appeared on the CAT! But maybe given our current, insane obsession with food and food shows, the CAT test-setters didn't want to feel out of step with the times.

But we have seen scheduling sets before so it is not that unique a set.

The conditions are fairly simple and require no deduction.

While there is additional information given in the set, it is not something that makes the set an open set.

I would rate this set and **9 out of 10** and do it straight away. Since it seems so simple, I'll just be a tad careful to not overlook anything.

Question 1: Client 1 is fully served by 10:10 since the longest time to cook is taken by the burger, 10 minutes.

Question 2: Since 2 orders cannot be prepared simultaneously, the prep for Client 2 can only start after Client 1 gets done at 10:10 and then Client 2's order is taken up, which gets over with the fries taking the longest time at 10:15, after which Client 3's order is started and finished off by 10:25 since the longest time is taken for the burger.

This is basically 6 marks in about 5 minutes including the reading of the set.

The rest of the two questions just remove the serial processing conditions, orders can be processed simultaneously.

Question 3: Of the two workers making Client 1's order, one gets free by 10:02 as soon as the ice-cream is done. This worker can take up Client 2's order as soon as it arrives at 10:05 and can serve it by 10:10 since the longest time taken is by the fries.

Question 4: Continuing from the previous question, once Client 2 gets started at 10:05, the worker making the ice-cream gets free at 10:07 and can take up the order of Client 3 and serve it by 10:17. So this worker was free for 3 minutes from 10:02 to 10:05 (between orders 1 and 2) and the first worker who finishes the burger for the Client 1 at 10:10 is free from then onwards. For how long was one of

them free? From 10:17 both of them are free. Before that Worker 1 is free from 10:10 to 10:17 while the other worker is free for 3 minutes, making the total 10 minutes.

The only weird thing about this set is the irony in the name of the fast food joint — Healthy Bites — selling burgers, fries, and ice-cream!

But for test-takers, this is a super healthy set with 12 marks in 10 minutes very much on the cards.

The Education Survey Set

A study to look at the early teaming of rural kids was carried out in a number of villages spanning three states, chosen from the North East (NE), the West and the South (S). 50 four-year-old kids each were sampled from each of the 150 villages from NE, 250 villages from W arid 200 villages from S. It was found that of the 30000 surveyed feds 55% studied in primary schools run by government (G), 37% in private schools (P) while the remaining 8% did not go to school (O).

The kids surveyed were further divided into two groups based on whether their mothers dropped out of school before completing primary education or not. The table below gives the number of kids in different types of schools for mothers who dropped out- of school before completing primary education:

It is also known that:

1. In S, 60% of the surveyed kids were from G. Moreover, in S, all surveyed kids whose mothers had completed primary education were in school.
2. In NE, among the O kids, 50% had mothers who had dropped out before completing primary education.
3. The number of kids in G in NE was the same as the number of kids in G in W.

39. What percentage of kids from S were studying in P?

1. 37%
2. 6%
3. 79%
4. 56%

40. Among the kids in W whose mothers had completed primary education, how many were not in school?

1. 300
2. 1200
3. 1050
4. 1500

41. In a follow-up survey of the same kids two years later, it was found that all the kids were now in school. Of the kids who were not in school earlier, in one region, 25% were in G now, whereas the rest were enrolled in P; in the second region, all such kids were in G now; while in the third region, 50% of such kids had now joined G while the rest had joined P. As a result, in all three regions put together, 50% of the kids who were earlier out of school had joined G. It was also seen that no surveyed kid had changed schools.

What number of the surveyed kids now were in G in W?

1. 6000
2. 5250
3. 6750
4. 6300

42. In a follow-up survey of the same kids two years later, it was found that all the kids were now in school. Of the kids who were not in school earlier, in one region, 25% were in G now, whereas the rest

were enrolled in P; in the second region, all such kids were in G now; while in the third region, 50% of such kids had now joined G while the rest had joined P. As a result, in all three regions put together, 50% of the kids who were earlier out of school had joined G. It was also seen that no surveyed kid had changed schools.

What percentage of the surveyed kids in S, whose mothers had dropped out before completing primary education, were in G now?

1. 94.7%
2. 89.5%
3. 93.4%
4. Cannot be determined from the given information

Have you really decoded this set on first reading?

After the relatively easy first set that didn't demand too much concentration to understand the set or to solve the questions, this set raises the level on both counts.

In the [previous post](#), we discussed how sets that are tough require you to not be on autopilot mode while reading and while solving.

Data Interpretation before Data Crunching

What I like about this set is that it tests your ability to look at data given and draw inferences about the data missing at a top-level, rows and columns missing, not data missing in cells given in the table.

The key thing is to understand what the table gives you.

You have the total number of kids in NE, W & S. So you have the totals of the rows.

The table gives you data pertaining to kids whose **mothers whose dropped out** of school.

The missing data pertains to kids whose **mothers went to school**.

So next to each column G, P and O there is a missing column with the numbers of the **kids whose mothers went to school**.

So each of the columns G, P and O has two sub-columns, of which one is filled and the other is missing.

The set also gives you the totals of G, P, and O.

The questions will revolve around the missing values that can be inferred from the three conditions.

Are the conditions plugin or deductive, they are plugin conditions since they give you further numbers that can be fit into the table.

Is the set a closed one? Yes, since the questions are directly asking for the values.

The set is standard, plugin and closed.

The last two questions are based on common additional information hence solving one means solving the other as well.

I would rate this a **7 out of 10**.

This is not different from the Pizza Set in Slot 2, where TC and NC were given in the Table but the missing columns were DD and EC. In both sets, the complementary information was missing — if it's not TC-NC then it has to be TC-EC, if it's not S-G-Dropout then it's S-G-School.

Since the reading and interpretation would have taken time. I think 12 marks in 15 minutes is not a bad return from this set.

Let us see how the set is solved. And is there a bit of Math-LR involved? Yes, in the last two questions.

If you rushed through the reading without visualizing the missing data, you will have had a tough time.

The Entrance Test Set

Applicants for the doctoral programmes of Ambi Institute of Engineering (AIE) and Bambi Institute of Engineering (BIE) have to appear for a Common Entrance Test (CET). The test has three sections:

Physics (P), Chemistry (C), and Maths (M). Among those appearing for CET, those at or above the 80th percentile in at least two sections, and at or above the 90th percentile overall, are selected for Advanced Entrance Test (AET) conducted by AIE. AET is used by AIE for final selection.

For the 200 candidates who are at or above the 90th percentile overall based on CET, the following are known about their performance in CET:

1. *No one is below the 80th percentile in all 3 sections.*
2. *150 are at or above the 80th percentile in exactly two sections.*
3. *The number of candidates at or above the 80th percentile only in P is the same as the number of candidates at or above the 80th percentile only in C. The same is the number of candidates at or above the 80th percentile only in M.*
4. *The number of candidates below the 80th percentile in P: Number of candidates below the 80th percentile in C: Number of candidates below the 80th percentile in M = 4:2:1.*

BIE uses a different process for selection. If any candidate is appearing in the AET by AIE, BIE considers their AET score for final selection provided the candidate is at or above the 80th percentile in P. Any other candidate at or above the 80th percentile in P in CET, but who is not eligible for the AET, is required to appear in a separate test to be conducted by BIE for being considered for final selection.

Altogether, there are 400 candidates this year who are at or above the 80th percentile in P.

43. What best can be concluded about the number of candidates sitting for the separate test for BIE who were at or above the 90th percentile overall in CET?

1. *3 or 10*
2. *10*
3. *5*
4. *7 or 10*

44. If the number of candidates who are at or above the 90th percentile overall and also at or above the 80th percentile in all three sections in CET is actually a multiple of 5, what is the number of candidates who are at or above the 90th percentile overall and at or above the 80th percentile in both P and M in CET?

Enter your response as an integer using the virtual keyboard.

45. If the number of candidates who are at or above the 90th percentile overall and also at or above the 80th percentile in all three sections in CET is actually a multiple of 5, then how many candidates were shortlisted for the AET for AIE?

Enter your response as an integer using the virtual keyboard.

46. If the number of candidates who are at or above the 90th percentile overall and also are at or above the 80th percentile in P in CET, is more than 100, how many candidates had to sit for the separate test for BIE?

1. *299*

2. 310
3. 321
4. 330

On the face of it, the set seems standard but is it?

How many times have you seen Percentiles and Venn Diagrams together?

The conditions are partly plugin and partly deductive. In addition, there is another set of selection criteria given.

If you look at the questions and options you can see that it is an Open Set. The options for the first question suggest more than one possibility.

There is common additional information for 2 and 3 and a different one for 4.

This would be a Non-standard, Partly Plugin and Open.

Given the complexity, I would rate it a **6 out of 10** and move on to the next set.

The Happiness Index

Simple Happiness index (SHI) of a country is computed on the basis of three parameters: social support (S), freedom to life choices (F) and corruption perception (C). Each of these three parameters is measured on a scale of 0 to 8 (integers only). A country is then categorized based on the total score obtained by summing the scores of all the three parameters, as shown in the following table:

Total Score	0-4	5-8	9-13	14-19	20-24
Category	Very Unhappy	Unhappy	Neutral	Happy	Very Happy

Following diagram depicts the frequency distribution of the scores in S, F, and C of 10 countries – Amda, Benga, Calla, Delma, Eppa, Varsa, Wanna, Xanda, Yanga, and Zoorna:

Further, the following are known.

1. Amda and Calls jointly have the lowest total score, 7, with identical scores in all the three parameters.
2. Zooma has a total score of 17.
3. All the 3 countries, which are categorized as happy, have the highest score in exactly one parameter.
47.What is Amda's score in F?

Enter your response as an integer using the virtual keyboard.

48. What is Zooma's score in S?

Enter your response as an integer using the virtual keyboard.

49. Benga and Delma, two countries categorized as happy, are tied with the same total score. What is the maximum score they can have?

1. 14
2. 15
3. 16

4. 17

50. If Benga scores 16 and Delma scores 15, then what is the maximum number of countries with a score of 13?

1. 0
2. 1
3. 2
4. 3

Since it is a bar-graph it is fairly standard in terms of information.

The conditions are all deductive since you have to consider the implications of the numbers.

Also by now, you will have realized that this is a Math LR set.

▪ How can you get a total of 7 with 3 scores?

▪ How can I get a total of 17 with 3 scores?

Two of the questions are closed and two are open.

Standard, Deductive (Math-LR), Partly open.

I will rate this a **6 out of 10**.

You can check out the solution [here](#).

The Projects Set

There are 21 employees working in a division, out of whom 10 are special-skilled employees (SE) and the remaining are regular-skilled employees (RE). During the next five months, the division has to complete five projects every month. Out of the 25 projects, 5 projects are “challenging”, while the remaining ones are “standard”. Each of the challenging projects has to be completed in different months. Every month, five teams – T₁, T₂, T₃, T₄ and T₅, work on one project each. T₁, T₂, T₃, T₄ and T₅ are allotted the challenging project in the first, second, third, fourth and fifth month, respectively. The team assigned the challenging project has one more employee than the rest.

In the first month, T₁ has one more SE than T₂, T₂ has one more SE than T₃, T₃ has one more SE than T₄, and T₄ has one more SE than T₅. Between two successive months, the composition of the teams changes as follows:

a. The team allotted the challenging project, gets two SE from the team which was allotted the challenging project in the previous month. In exchange, one RE is shifted from the former team to the latter team.

b. After the above exchange, if T₁ has any SE and T₅ has any RE, then one SE is shifted from T₁ to T₅, and one RE is shifted from T₅ to T₁. Also, if T₂ has any SE and T₄ has any RE, then one SE is shifted from T₂ to T₄, and one RE is shifted from T₄ to T₂.

Each standard project has a total of 100 credit points, while each challenging project has 200 credit points. The credit points are equally shared between the employees included in that team.

51. The number of times in which the composition of team T₂ and the number of times in which the composition of team T₄ remained unchanged in two successive months are:

1. (2, 1)
2. (1, 0)
3. (0, 0)
4. (1, 1)

52. The number of SE in T₁ and T₅ for the projects in the third month are, respectively:

1. $(0, 2)$
2. $(0, 3)$
3. $(1, 2)$
4. $(1, 3)$

53. Which of the following CANNOT be the total credit points earned by any employee from the projects?

1. 140
2. 150
3. 170
4. 200

54. One of the employees named Aneek scored 185 points. Which of the following CANNOT be true?

1. Aneek worked only in teams T_1, T_2, T_3 , and T_4
2. Aneek worked only in teams T_1, T_2, T_4 , and T_5
3. Aneek worked only in teams T_2, T_3, T_4 , and T_5
4. Aneek worked only in teams T_1, T_3, T_4 , and T_5

On the face of it, this is a kind of set that I don't like since it needs more donkey work than reasoning but I know that I am halfway through the test and have got 24 marks by solving 2 out of 4 sets.

I know that I need another 2 out of the remaining 4 to safely clear the cut-off.

Is the set standard? No!

Conditions are neither plugin nor deductive but directions.

Is it a closed set? Yes, all the questions have direct answers and only 1 has additional information.

Non-standard, Directions, Closed.

I know that this set is about putting my head down, concentrating hard and making 5 tables for 5 months.

I will rate this a **7.5 out of 10**.

I start with the first condition that each team has one SE more than the next one starting with T_1 .

What is the total number of SEs? 10.

Math-LR, anyone?

If the lowest one, T_5 has x then the rest will $x+1, x+2, x+3$ and $x+4$.

$$5x + 6 = 10$$

But we have a problem since x cannot be a fraction.

Even if $x=1$ then $5x+6$ will be more than 10.

What does that mean?

T_5 has 0 SEs and the rest have 1 SE, 2 SEs, 3 SEs, and 4SEs, totaling up to 10.

The team with the challenging project has 1 more team-member than all the rest.

So if the total number is 20, all the rest are x,x,x,x, and the team with the challenging project is x+1. In other words, four teams with 4 people and the one team with the challenging project having 5 people.

So for Month 1 T1 has the challenging project and hence 5 people, 4 SE + 1 RE. The rest have 3 SE + 1 RE, 2 SE + 2 RE, 1 SE + 3RE and 0 SE + 4 RE.

After this, you just put your head down and do the donkey work of rotating people around the teams as per the directions and you will end up with a rough sheet that looks like this.

I suggest doing this on your own to see how prone you are to making silly mistakes.

Questions 51 & 52: The first two questions are just about marking the answer from the table. The next two are classic Math-LR.

Question 53: An engineer can get either get 40 points

- by being part of a 5-member team on a challenging project that gets 200 points in total or 25 points
- by being part of a 4-member team on a regular project that gets 100 points in total
So all the question is asking you to do is to see which number cannot be made with 40s and 25s.

The maximum is all 40s or 200 points. Any number less than that is a combination of 25s and 40.

So what will I do?

I'll remove 40 or multiples of 40 from each option and see if the remainder is divisible by 25. Or I can remove 25 or multiples of 25 and see if the balance is divisible by 40.

Option 1, remove 40 from 140 and 100 is divisible by 25.

Option 2, remove 40, 80 or 120 from 150 but the remainder is not divisible by 25. Hence this is your answer.

Question 54: If Aneek scored 185 points then he should have scored four 40s and one 25. So he was one 4 challenging projects and one 1 regular project.

If every month starting with T1, the next team was given a challenging project then it means that Aneek moved on to the next team every month *except* for one month.

Now you go by options and see which one is not possible.

Option 4 is not possible since there is no direct exchange between T1 to T3. There is no way Aneek can go from T1 to T3 without going through T2.

This set will if done properly ensuring that you make no error will at the maximum take 15 minutes for 12 marks.

So we are around the 45-minute mark with 36 marks in hand.

The Platform Set

In a square layout of size $5m \times 5m$, 25 equal sized square platforms of different heights are built. The heights (in meters) of individual platforms are as shown below:

Individuals (all of the same height) are seated on these platforms. We say an individual A can reach another individual B if all the three following conditions are met:

1. A and B are In the same row or column
2. A is at a lower height than B
3. If there is/are any individuals (s) between A and B, such individual(s) must be at a height lower than that of A.

Thus in the table given above, consider the Individual seated at height 8 on 3rd row and 2nd column. He can be reached by four individuals. He can be reached by the individual on his left at height 7, by the two individuals on his right at heights of 4 and 6 and by the individual above at height 5.

Rows in the layout are numbered from top to bottom and columns are numbered from left to right.

56. How many individuals in this layout can be reached by just one individual?

1. 3
2. 5
3. 7
4. 8

57. Which of the following is true for any individual at a platform of height 1 m in this layout?

1. They can be reached by all the individuals in their own row and column
2. They can be reached by at least 4 individuals
3. They can be reached by at least one individual
4. They cannot be reached by anyone

57. We can find two individuals who cannot be reached by anyone in

1. the last row
2. the fourth row
3. the fourth column
4. the middle column

58. Which of the following statements is true about this layout?

1. Each row has an individual who can be reached by 5 or more individuals
2. Each row has an individual who cannot be reached by anyone
3. Each row has at least two individuals who can be reached by an equal number of individuals
4. All individuals at the height of 9 m can be reached by at least 5 individuals

The set is definitely non-standard.

Conditions are neither plugin nor deductive but directions.

The set is fully closed since there is no additional information in the questions.

Non-Standard, Directions, Closed.

I would rate this an **8 out of 10**.

When I take a look at the questions, I know that since the set is so simple, they will test every part of the platform. In other words, I will be best served by just drawing a new table where instead of the height I have how many can reach it.

This done with full concentration will take 5 minutes after this you can just tick off the answers. I suggest doing this on your own to see how prone you are to making silly mistakes.

This set should give you 12 marks in 10 minutes.

We have a total of 48 marks and have almost reached the end of the time-limit.

The Airlines Set

A new airlines company is planning to start operations in a country. The company has identified ten different cities which they plan to connect through their network to start with. The flight duration between any pair of cities will be less than one hour. To start operations, the company has to decide on a daily schedule.

The underlying principle that they are working on is the following:

Any person staying in any of these 10 cities should be able to make a trip to any other city in the morning and should be able to return by the evening of the same day.

59. If the underlying principle is to be satisfied in such a way that the journey between any two cities can be performed using only direct (non-stop) flights, then the minimum number of direct flights to be scheduled is:

1. 45
2. 90
3. 180
4. 135

60. Suppose three of the ten cities are to be developed as hubs. A hub is a city which is connected with every other city by direct flights each way, both in the morning as well as in the evening. The only direct flights which will be scheduled are originating and/or terminating in one of the hubs. Then the minimum

number of direct flights that need to be scheduled so that the underlying principle of the airline to serve all the ten cities is met without visiting more than one hub during one trip is:

1. 54
2. 120
3. 96
4. 60

61. Suppose the 10 cities are divided into 4 distinct groups o_1, o_2, o_3, o_4 having 3, 3, 2 and 2 cities respectively and that G_1 consists of cities named A, B and C. Further, suppose that direct flights are allowed only between two cities satisfying one of the following:

1. Both cities are in G_1
2. Between A and any city in G_2
3. Between B and any city in G_3
4. Between C and any city in G_4

Enter your response as an integer using the virtual keyboard.

62. Suppose the 10 cities are divided into 4 distinct groups G_1, G_2, G_3, G_4 having 3, 3, 2 and 2 cities respectively and that G_1 consists of cities named A, B and C. Further, suppose that direct flights are allowed only between two cities satisfying one of the following:

1. Both cities are in G_1
2. Between A and any city in G_2
3. Between B and any city in G_3
4. Between C and any city in G_4

However, due to operational difficulties at A, it was later decided that the only flights that would operate at A would be those to and from B. Cities in G_2 would have to be assigned to G_3 or to G_4 .

What would be the maximum reduction in the number of direct flights as compared to the situation before the operational difficulties arose?

Enter your response as an integer using the virtual keyboard.

The set is a standard routing set and we have seen many of this type of. Is this a LR set or a P&C Set? Definitely P&C.

Conditions are again directions.

It is an open set since conditions are given in the questions and you are not filling a table or completing any representation.

This is a set that can be read quickly and the first two questions can be attempted very fast. But the catch is that one can also make mistakes very fast since one approaches the set from a P&C space. Even if you attempt this set, questions 3 and 4 are time-taking and tricky.

I would rate this a **7 out of 10** and solve only the first 2 questions and exit the set.

Question 59: We can choose two cities out of 10 cities in $10C_2$ or 45 ways. Between any two cities, you need two flights each in the morning and at night. So the total number of flights needed are $45 \times 4 = 180$.

Question 60: You need flights between hubs in the same way as in the previous question so that will be $3C_2 \times 4 = 12$. Between each of the 3 hubs and the 7 cities you need flights, each hub is connected to 7 cities so 3 hubs have 21 connection. For each connection, you need two flights each in the morning and at night, making the total flights between hubs and cities $21 \times 4 = 84$. The total number of flights will be 96.

The Car Routes Set

Four cars need to travel from Akala (A) to Bakala (B). Two routes are available, one via Mamur (M) and the other via Nanur (N). The roads from A to M, and from N to B, are both short and narrow. In each

case, one car takes 6 minutes to cover the distance, and each additional car increases the travel time per car by 3 minutes because of congestion. (For example, if only two cars drive from A to M, each car takes 9 minutes.) On the road from A to N, one car takes 20 minutes, and each additional car increases the travel time per car by 1 minute. On the road from M to B, one car takes 20 minutes, and each additional car increases the travel time per car by 0.9 minutes.

The police department orders each car to take a particular route in such a manner that it is not possible for any car to reduce its travel time by not following the order, while the other cars are following the order.

63. How many cars would be asked to take the route A-N-B, that is Akala-Nanur-Bakala route, by the police department?

Enter your response as an integer using the virtual keyboard.

64. If all the cars follow the police order, what is the difference in travel time (in minutes) between a car which takes the route A-N-B and a car that takes the route A-M-B?

Enter your response as an integer using the virtual keyboard.

65. A new one-way road is built from M to N. Each car now has three possible routes to travel from A to B: A-M-B, A-N-B, and A-M-N-B. On the road from M to N, one car takes 7 minutes and each additional car increases the travel time per car by 1 minute. Assume that any car taking the A-M-N-B route travels the A-M portion at the same time as other cars taking the A-M-B route, and the N-B portion at the same time as other cars taking the A-N-B route.

How many cars would the police department order to take the A-M-N-B route so that it is not possible for any car to reduce its travel time by not following the order while the other cars follow the order? (Assume that the police department would never order all the cars to take the same route.)

Enter your response as an integer using the virtual keyboard.

66. A new one-way road is built from M to N. Each car now has three possible routes to travel from A to B: A-M-B, A-N-B, and A-M-N-B. On the road from M to N, one car takes 7 minutes and each additional car increases the travel time per car by 1 minute. Assume that any car taking the A-M-N-B route travels the A-M portion at the same time as other cars taking the A-M-B route, and the N-B portion at the same time as other cars taking the A-N-B route.

If all the cars follow the police order, what is the minimum travel time (in minutes) from A to B?

(Assume that the police department would never order all the cars to take the same route.)

1. 26
2. 32
3. 29.9
4. 30

This set can be seen as a variation of the fast food set, but with more complexity. If I rated that as an 8 this would at best a **6.5 out of 10**.

What should be your order of attempting the sets?

Let's do a recap of the 8 sets.

Set 1: The Fast Food Joint — Non-Standard, Plugin, Closed — **9/10**

Set 2: The Education Survey — Standard, Plugin, Closed — **7/10**

Set 3: The Entrance Test — Non-Standard, Deductive, Open — 6/10

Set 4: The Happiness Index — Standard, Deductive, Open — 6/10

Set 5: The Projects Set — Non-Standard, Directions, Closed — **7.5/10**

Set 6: The Platform — Non-Standard, Directions, Closed — **8/10**

Set 7: The Airlines — Standard, Directions, Open — **7/10**

Set 8: The Car Routes – Standard, Directions, Open – 6.5/10

Now there are two ways for you to go about the section

- Read & rate all 8 sets start from the easiest set
 - Read & rate the first 4 sets, do only the 8/10 sets and then scan and rate the next 4 and do the 8/10 sets and then do the sets in decreasing order of rating
- Remember that sets appear in randomized order to different candidates.

Suppose you read and rate the first four sets and have 7,6,7,6 as your ratings and go ahead and take 30 minutes to solve the two 7s without getting stuck.

The next four have 8,8,8,7. What position would you rather be in the last 30 minutes?

- 36 marks and two more sets to crack or
- 24 marks and three more sets to crack

I would always want to be in the first position since the last 15 minutes usually tend to be rushed and there is a high chance that one will make silly mistakes.

I will rather have known that early about the three 8s mean and figure that the cut-off will be high and hence be in a much better position to get two right sets in last 30 minutes.

By either method in this section, my order will be

1. The Fast Food Joint, 4 questions
 2. The Platform Set, 4 questions
 3. The Projects, 4 questions
 4. The Education Survey, 4 questions
 5. The Airlines, 2 questions
-

What score was realistically possible

All test-takers should have got at least the Fast Food, Platform sets right. If you just did these two and wasted all the rest of your time, you will still have got 24 marks!

A test-taker who is currently scoring around 85 percentile in the SimCATs **should** have got at least 3 sets out of 5 we shortlisted and scored 36 marks.

A test-taker scoring around 95 percentile and above on the SimCATs **could** have got 4 sets right and scored 48.

A test-taker scoring a 99-plus on the SimCATs **could** have answered 18 questions and scored 54. Even If we account for silly mistakes, test-takers should and could have scored 20, 28, 40 and 46 at the above-mentioned percentiles.

These are raw scores we are talking about and since Slot 1 was tougher than Slot 2 your scaled scores will have been higher than the raw scores.

A scaled score of

- 24 was approximately 85 percentile
 - 28 was approximately 90 percentile
 - 34 was approximately 95 percentile
 - 44 was approximately 99 percentile
- So a 54 raw would have been scaled higher and corresponded to a percentile of 99.99.
-

What made so many people fumble?

3 out of the 4 do-able sets were Non-Standard!
The main roadblock to right selection always goes back to familiarity.

Many test-takers will have chosen The Airlines, the Car Routes and maybe the Entrance Test sets to solve since they are familiar.

Test-takers have an inborn bias towards choosing familiar LR but tough LR over DI and unfamiliar LR.

I keep wondering what makes everyone think they are good at LR?

Do all of these people solve a MEDIUM Sudoku puzzle in under 3:30 every single time and a HARD one in under 5:30? I am sure only a few will say YES to both questions.

The writing is on the wall — you will not get 4 Standard LRs that you can solve on auto-pilot!

CAT DI-LR is getting difficult because

- they are throwing up non-standard sets that need to be read slowly to be really understood — The Platform and The Projects sets
 - even the easy sets needed to be solved with workman-like effort and surgeon-like precision — The Projects Set, Platform Set, The Chess Set
 - they are setting up some really good DI sets that need you to figure out what's missing at a top-level — row or column — and not what's missing in the cells — The Education Survey, The Pizza Set
 - they are introducing Math-LR sets — The Happiness Index Set, The Dormitory Set, The Old Woman and her Wealth, The Tea Tasting Set, The Airline Seating Set
- So what's the verdict?

Is it as tough as everyone is making it out to be? No.

Is it along the lines that everyone wants it to be? No.

My friend did not kill the section as he customarily does because he was woefully short of sleep because the paper wasn't really that tough.

Hope the three posts on DI-LR has given you a comprehensive picture of what the section is testing.

One of the readers correctly identified that a big part of cracking DI-LR is how we represent the data on the rough sheet and how it sometimes doesn't always click.

Let me know through the comments if you want me to do a post specifically on how to find the best representation for the given data and why it's not a matter of *clicking* but a matter of how one gets into position to play a shot.

CAT 2017: How to improve your QA percentile

- I

Unlike the other two sections QA is a section that has a direct link to what you have done in school and college. Most of the topics that are asked on the CAT have also been a part of school curriculum. This I feel is the biggest roadblock in front of test-takers wanting to achieve higher scores on the CAT Quant irrespective of their relationship with Quant with high Math scores during X and XII exams not having any direct correlation with ability on the CAT QA.

This has to do with the simple fact that test-takers never fully grasp the difference between the two formats since they are as different from each other as chalk and cheese. So high is my resentment for the way they taught Math in school that I can write an entire blog post on that!

But I will try to condense my grouse — they never taught us to solve they taught us solutions; we never learnt to solve, we memorised solutions.

If you want to get better at CAT Quant you should stop memorising solutions and start solving problems.

When I mean start solving problems I mean literally start solving a problem the way a mechanic will fix a bike.

- Do mechanics memorise the way they repaired each and every bike?
- Do mechanics start fixing a bike or car before they understand the problem?
- Do mechanics need to constantly revise the basics of how a automobile works before they begin to fix every new vehicle?

The answer to all the above questions is a resounding NO! So the first step is to make this perceptual shift in your mind before you can think about increasing your scores on CAT QA.

Leave no concept unturned

While the QA section of the CAT might seem like one big block of Math, nothing could be farther from the truth.

Each of the topics on CAT QA is a different ballgame altogether and one can't club it all under a big Math umbrella. This is the reason why test-takers have such varying degrees of expertise across the areas within CAT QA —

- some are exceptional at Numbers but poor at Arithmetic
- some are great at Arithmetic and Geometry but really bad at P&C
- some find P&C and Probability solvable but find functions a problem

This in itself indicates how each topic on Math ends up testing a different kind of mental skill set, making the QA section similar to a Heptathlon or Decathlon, which requires you to be good at 7 and 10 different events.

To compete in such an event you need to first know how to perform in each individual event. You cannot know how to perform only 5 out of 7 events in a heptathlon (100 metres hurdles, High jump, Shot put, 200 metres, Long jump, Javelin throw, 800 metres) and then try to compete.

It goes without saying that to succeed at such an event you need to be above average in all events and great at a few, success on the CAT requires something very similar — you need to know the basics of all the topics and be competent enough to solve Easy and Medium questions from all of them.

So I hope after this no one will ask what the important topics for CAT QA are (that indicates the mindset of Board Exam preparation and not CAT prep).

Once the basics are in place then the three building blocks to get better at CAT QA are: Accuracy, Selection & Speed.

Why accuracy is the first thing you need to work on

The first thing you need to do is to fix the machine or rather ensure that the machine churns out a very high percentage of items within the quality standards. While achieving 6-sigma levels of accuracy is a very high bench-mark to set, you should strive have an accuracy rate of at least 80 percent.

Irrespective of the how many concepts you know, if your machine has an error rate of 35% then you are always going to be performing below par.

- 20 Attempts at 65% accuracy will fetch you 32 marks
- 30 Attempts at 65% accuracy will fetch you 46 marks
- 20 Attempts at 80% accuracy will fetch you 44 marks
- 20 Attempts at 85% accuracy will fetch you 49 marks

What should you focus — attempts or accuracy — given that you are taking the CAT to enter the world of business?

Obviously accuracy since you will always look to squeeze the maximum out of every dollar invested (unless you run an e-commerce business and have investors to watch your back, albeit not for perpetuity).

What do you think is easier to achieve?

- an increase in attempts from 20 to 30 or
- an increase in accuracy from 65% to 85%

If your accuracy is low then trying to dramatically increase attempts will not further bring down your accuracy. If at your current speed you are prone to crashing 3-4 out of 10 times then at a higher speed you will only crash more often.

So fix the machine to get the most out of it. The table below will give you more than enough reasons to do so.

Attempts/ Accuracy	60%	65%	70%	75%	80%	85%	Score Improvement
15	21	24	27	30	33	36	15
16	22	26	29	32	35	38	16
17	24	27	31	34	37	41	17
18	25	29	32	36	40	43	18
19	27	30	34	38	42	46	19
20	28	32	36	40	44	48	20
21	29	34	38	42	46	50	21
22	31	35	40	44	48	53	22
23	32	37	41	46	51	55	23
24	34	38	43	48	53	58	24
25	35	40	45	50	55	60	25
26	36	42	47	52	57	62	26
27	38	43	49	54	59	65	27
28	39	45	50	56	62	67	28
29	41	46	52	58	64	70	29
30	42	48	54	60	66	72	30
31	43	50	56	62	68	74	31
32	45	51	58	64	70	77	32
33	46	53	59	66	73	79	33
34	48	54	61	68	75	82	34

Use the above table to see where you are right now and then try to move rightward first only then try to move downward.

Diagnose the reasons behind your low accuracy

Good accuracy is a function of two things — your solving technique and your choice of questions. Since we will take up selection in the next section of this post, here we will deal with just solving technique.

Since we have undergone the induction process of learning solutions during the long formative years of our education, we don't really know the technique of problem solving as such. So we usually attribute our mistakes to that worn-out phrase — silly mistake. If we continue to use that phrase then neither can I nor can anyone help you out since the only solution is to stop being silly!

Even if you tell yourself that you will be serious, that you will concentrate hard, it is not going to work since there are just words or attitudes and not process changes.

To improve your accuracy on CAT QA, you need to first stop viewing your mistakes through the silly-mistake lens, view it through the process-mistake lens. These are the big process mistakes to which most errors can be attributed.

Missing crucial information in the question – MISREADING

We are always in a tearing hurry to read the question, so it is not a surprise that we tend to not read the parts of the question, usually the first parts (*if n is an integer*) or the last part (*if they work on alternate days*).

Since we are always trying to map a question to a pattern we have previously learnt or to a formula, we tend to ignore the unique aspects of the question in front of us and tend selectively pick out information that either matches a pattern or can be put in to a formula.

Taking your eye off the ball while calculating – MISCALCULATION

Keen followers of cricket will know how Sunil Gavaskar always gets agitated when a batsman gets run-out because of not grounding the bat. For him it is unpardonable since to ground the bat is part of the process of batsmanship and more importantly it is a case of throwing away one's wicket. He is known to have been such a stickler for correctness — he always took an extra run after a century before celebrating since the manual scorer could have made a mistake — no wonder he gets so incensed!

Just like running between the wickets is the hard (or donkey) work in cricket, the calculation part is the hard (or donkey) work in the CAT QA. You can either choose to just run without really being alert and present or be vigilant & fast at the same time a la Dhoni & Virat.

If you watch those two they don't just run blindly, they have their eye on where the ball has gone and on the fielder, that is what makes them exceptional. They are as alert during the running phase as they are when they are facing up to the ball and playing a shot.

Missing the complexity of the question – MISJUDGEMENT

Sometimes you make a mistake not because of the above two reasons but because you have underestimated the complexity of a question.

This underestimation can happen at two stages:

- One during the initial stages when you have unknowingly simplified the problem. The reason for this though is again related to mapping a question while reading itself to a previous pattern in your head and thus missing the extra knot that makes the specific question a tad tougher.
- The other during the execution stage in the rush to solve the question and move forward to the next question.

Such errors tend to occur in questions involving permutations & combinations or probability.

So firstly, do a diagnosis of the process mistakes you commit. Make a list of all the mistakes you have made in the preceding SimCATs in an excel sheet and next to each mistake write down the process mistake you made for the questions that you could have solved but ended up messing up.

You will come to know which process mistake is contributing how much to your errors, for example, Misreading (40%), Miscalculation (25%) & Misjudgement (35%)

How to eliminate errors due to misreading

If you are making quite a few errors because of misreading the question and if these questions are not towards the end of a section, which means that the misreading was not due to time constraints then you should:

Drop your pace of reading

It might seem as if you will solve far fewer questions by doing this but dropping the pace does not mean that you should read at a snail's pace. It just means that you will read without rushing. While you might see a marginal dip in the number of attempts, it will be more than offset by the increase in score.

Read the question in front of you

Do not always map the question in front of you to a pattern or a formula as you read it. This is a big reason why even though you read at the right pace you skip information – you selectively pick and exclude information.

How to eliminate errors due to miscalculation

Different questions will require you to concentrate at different levels, some might take up 20% of your mind space some 80% but the key is that within the solving time of the

problem, the same level of concentration has to be maintained, be it 20% or 80%, throughout the solving of the problem without viewing the execution of a solution as burden or taking your eye off the ball during the calculation phase.

Even when you are approximating, which means that you are cutting open something with say three slashes of your sword and not ten, each of the three slashes has to be made with concentration and precision.

Your guard should never drop. You should have a quiet, steady and steely intensity, which is best epitomised by Dhoni and Virat.

How to eliminate errors due to misjudgement

Firstly, these are higher order errors where you are not entirely to blame. The test-setter might have managed to cleverly slip in a trap but that cleverness sometimes relies on you making a process mistake.

So to start off with do not start solving as you start reading. By starting to solve as you read you are setting yourself up for a host of errors:

- taking the wrong thing as X only to calculate it and find it in the answer options, move on to the next question thinking you are right and being shocked when you see the score
- assuming the question to be simple and setting up a simplistic structure to solve and not accounting for the build up in complexity as you are reading the question leading to having to reformulate the problem with different variables and equations

While reading only evaluate how the solution will unfold, what you have what you do not have etc.

Before you jump to the solving just pause for a moment to think about

- the complexity of the problem or possible cases if it is a P&C problem
 - what will be convenient — taking X or taking a 100
 - what will be convenient taking 100 or taking a number that is a multiple of the ratios (*if two things are in the ratio 7:8, and you need to assume the total as some value, it is better to take the total as 15 or 150 and get the two values as 7, 8 or 70, 80 instead taking 100 and getting 700/15 and 800/15*)
-

Improve your solving process

If you see most of our inefficiencies occur because

- we are always in a rush, operating all of the time out of a fear of time running out
- we do not read the question properly, so without figuring out the problem we want to deliver a solution

- we do not think about how to solve the problem, we just jump into solving; aren't we supposed to think, isn't this supposed to be a test of reasoning in different contexts?
It is not possible to make these processes changes just like that, you need to program your brain to slip out of its current grooves and create new pathways. To do this talk to yourself before every practice session about the changes you need to make — all the great sportsmen do it.

So before every practice session tell yourself to

- read the question properly till the end without panicking
- concentrate hard and never take your eyes off the ball
- think, think and think and not just regurgitate old solutions.

You cannot do the same thing and expect different results

If the reading of this post has to benefit then you should understand the importance of making these process changes.

When cricketers are a bit out of form and getting out in a particular fashion

- Ricky Ponting getting caught LBW
- Brian Lara getting caught in the slips
- Sachin Tendulkar getting caught driving

What do you think their coaches told them? Did they just say — *you are making these silly mistakes just stop making them*— they did not.

In two of the cases they identified a clear process mistake

- Ponting, during that phase, was leaning forward too much and tending to fall over and hence getting trapped in front when the ball was pitching and swinging in
- Lara's bat was coming down from third slip instead of first slip and given his backlift was resulting in him slashing across the line instead of getting behind it
In other cases they identified tendencies and just avoided them
- After scoring a paltry 82 runs from 5 innings, including two scores of naught, Sachin came back to score a 241 — batting for more than 10 hours and not playing a single stroke on the off side! More recently, after a disastrous tour of England, Virat Kohli with the help of Sanjay Bangar identified that the reason for him getting out so frequently to Anderson was that his right toe was pointing towards cover and the left one towards mid-off, making his stance very straight on — this resulted in Anderson squaring him up. So before the first test in Australia they changed the stance to a more side-on one — right toe pointing towards point and the left towards cover — that helped him play beside the line and leave the ball.

If the best batsmen in the past and current generations can identify process changes and adopt a different approach to get better results, so can you.

Be it in life, in sport, or in business, the mantra is always simple — change or perish!

And for the change to happen do not wait for Newton's Second Law to kick in; the external force — the need to crack the CAT this year — is already there do not wait for the force to increase — failing to crack it this year — before you make changes.

In the next post we will take up the other two building blocks — selection & speed; before that please do the diagnosis to improve your accuracy and start ringing in the changes.

CAT 2017: How to improve your QA percentile – Part II

In the [first part of this post](#) we covered on the first building block to achieve higher scores and percentiles on CAT QA — accuracy. In this post we will take up the next one — selection.

QA is the section that gets the maximum attention of test-takers of all stripes and there is always a litany of frustrations and queries that plagues aspirants —

- I am good at Math and like Math but my score just does not seem to go up!
 - Should one attempt the long Arithmetic questions?
 - I feel every problem is do-able!
 - I get stuck for long with one problem without realising it
 - I realise there were many problems I could have solved when I analyse the test
- The answer to all of these questions lies in the way you select questions and the way you navigate between them.
-

What should be your single biggest agenda on the CAT — Return on Time Invested (RoTI).

This is toughest to achieve in the QA section because there are no sets for you to choose questions in bulk. So how does go about question selection?

Does it make sense to first skim through all the questions?

This is a reasonably good strategy but I feel that there some drawbacks to this.

- Firstly, since you have to go through 34 questions you will really try to read the question fast, say in under 30 seconds and take a call whether to do it or not.
 - Secondly, once you have selected a question, there is a high chance that yo get stuck on that questions because you feel since you have selected this and rejected others you have to do this. So test-takers using this approach tend to
 - spend very little time selecting
 - and get stuck on questions they have chosen
- What you ideally be doing is
- spending enough time at the beginning to evaluate the question properly
 - never get stuck on a question for more than 3 minutes
-

A better approach is the A-B-C or Now-Later-Never approach

After you finish reading a question the first task is to decide whether to do the question – NOW (A), LATER (B) or NEVER (C).

How do you classify these questions into these categories.

Your approach should be the one that you would follow if you were required to pluck fruits from a tree – you will pick up all the lowest hanging fruit first and then go on to picking the ones that are higher up.

While it is easy to judge the height of fruit hanging on trees it is quite another matter to judge the difficulty level of questions that appear on the QA section of the CAT.

How do test-takers normally select or rather reject questions:

- I am good at Numbers (or I just did numbers) so I will do this question.
- *Geometry* is better left alone, it is always time-taking
- P & C and Probability no way.
- These Arithmetic questions are too long and hence will consume a lot fo reading time
- I haven't learnt and have never liked *Logarithms* and *Functions* so better leave.
So what happens when you follow this approach?

No Arithmetic, No Geometry, No Logs, No P&C, No Probability, Only basic Algebra, No Polynomials!

You are left with very few questions! You will get at least 5-7 questions from each of the 5 Areas – Numbers, Arithmetic, Algebra, Geometry and Modern Math.

If you refuse to do questions from more than 2 areas you will be left with around 15-20 questions to take a shot at and will end up attempting around 12-15 and getting 10-12 right and have a score in the 30s to 40s.

So the first rule is that you shall not discriminate against a question based on topic or its length.

You will us your powers of discrimination to identify whether the question is Easy (NOW), Medium (LATER) or Difficult (NEVER).

Some of you might have a different problem

- I know all topics and hence try to solve all questions!
Discriminate on the wrong grounds and not discriminating at all are equally punishable with low scores!

A question should be categorised as

NOW: If you can see the clear steps to the answer and there are no too many steps
LATER: If you feel you can do it but you will know the way only after you start doing it — you cannot see the four steps to the answer right now — or if you feel that there are too many steps.

NEVER: You do not have any idea how to go about the question
So in effect your QA score will depend on your ability to

- make 34 good selection decisions and
 - exit questions without getting stuck
-

How to classify a question as Now, Later or Never

The process listed above is easier said than done (management entrance tests are in that way very similar to management itself — it is not very easy to execute everything that is told in the book)

So let's take the questions in the QA section of a 2016 SimCAT and try out this process.

SET 1: For the set of questions below, classify the questions into NOW, NEVER or LATER based on your current approach

SimCAT 5 QUANTITATIVE ABILITY

- Each term a_k of the sequence a_1, a_2, \dots, a_{50} is defined as k less than the sum of the other 49 terms of the sequence. Find the value of S_{50} , the sum of all the 50 terms of the sequence.
(1) $1225/48$ (2) $425/16$ (3) 1275 (4) $1275/16$
- Which of the following does not completely divide $200!$?
(1) $(72)^{41}$ (2) $(72)^{44}$ (3) $(72)^{47}$ (4) $(72)^{50}$
- Set A represents the set of all perfect squares up to 10000. In how many ways can two distinct numbers be selected from A such that their sum will be a multiple of 10?
- Anil has some one rupee, 5 rupees and 10 rupees notes. The number of one rupee notes is 1 more than twice the number of 5 rupees notes. Similarly, the number of 5 rupees notes is 1 more than twice the number of 10 rupees notes. The total value of money with him is definitely divisible by _____.
(1) 10 (2) 8 (3) 5 (4) Cannot be determined
- $ax^2 + bx + c = 0$ (where $a, b, c > 0$) is a quadratic equation with equal roots such that a, b and c are in arithmetic progression with positive common difference. What will be the sum of the roots of this quadratic equation?
(1) $2/(2\sqrt{3})$ (2) $2/(\sqrt{3} - 2)$ (3) $-2/(\sqrt{3} + 2)$ (4) Cannot be determined
- M and N are two positive integers such that both M^2 and N^2 are perfectly divisible by 5. If $M + N$ will give a remainder of 0 when divided by 7, which of the following cannot be the remainder when $M^2 + N^2$ is divided by 7?
(1) 2 (2) 3 (3) 4 (5) 1
- A flight ticket costs twice that of a railway second AC ticket. The railway first AC ticket costs 30% more than the second AC ticket. If the flight tickets are booked in bulk, the airline offers a discount as per the following policy: No discount on first 10 tickets, 10% discount on each of the 11th to 20th tickets, 20% discount on each of the 21st to 30th tickets, 30% discount on each of the 31st to 40th tickets, 40% discount on each of 41st to 50th tickets and 50% discount on each of the tickets starting from 51st. A travel agent spends equal amount of money on buying flight tickets and first AC tickets such that he buys equal number of flight tickets and first AC tickets. How many second AC tickets could he have purchased using the total amount spent by him on buying both flight tickets and first AC tickets?
- If $x + y = 10$ where both x and y are positive real numbers, what is the maximum value of x^2y^3 ?
(1) 3125 (2) 3456 (3) 7776 (4) 4500
- What is the sum of all the 4-digit numbers (with distinct digits) that can be formed using the digits 4, 5, 8 and 9?

A small caveat before I give my classification:

Each of us can make different choices based on our abilities so my choices need will differ from yours but the underlying agenda is to choose the right questions and maximise RoTI.

QUESTION 1: LATER (< 1 min.)

As I read this question I know they have given me a clear equation to write ak and that once I write that equation and try to find a pattern for a₁, a₂ etc. I will get a pattern. But what that pattern will be I will know only after I get. Hence, I would mark this for later.

QUESTION 2: NOW or NEVER (or Reverse Sweep!) (< 1 min. or 3 min.)

This question is directly based on a concept in Number Systems. We know that 72 is 8*9 or 2³*3².

If any of the options does not completely divide 200! then it means that 200! does not have as many 2s and 3s as there are in that option.

So one needs to find how many powers of 2 and 3 are there in 200!.

So at this point you know whether you know the method to find how many powers of 2 and 3 are there in 200! or not. If you know you do it immediately if you do not you leave to not come back to this question again.

I could not recollect the formula (as most of my students know I do not know advanced formulas that were not covered in school)

So what did I do?

I just looked at the answer options and gave some thought to the logic.

If $(72)^{41}$ is the answer — it does not completely divide 200! — that means it has more 2s and 3s than 200!

Now if $(72)^{41}$ has more 2s and 3s than 200! then so will $(72)^{44}$ and the other two options since all of them are higher powers.

So if option 1 cannot divide then 2, 3 and 4 also cannot divide but you can have only 1 answer. So by the same logic it cannot be option 2 or 3 since then 2, 3 and 4 should also be right. So the only logically possible answer is option 4, the highest power of 72, $(72)^{50}$.

QUESTION 3: LATER (< 1 min.)

This is a problem involving counting and drawing up a list — two perfect squares whose sum will end in zero. Such problems usually tend to take time and also have a scope for error. So at this point I will mark this question for later and move ahead.

In the first 10 questions you should always be decisive in your choices and move quickly with the focus being on solving only those questions you are absolutely sure about. Like in a T20 or in a ODI match you should have a sense of urgency in this phase.

QUESTION 4: NOW (2 min)

This question has to be done immediately since you can clearly see the steps to the answer:

- You need to take the number of 10 rupee notes as x , it is given that number of 5 rupee notes as $2x + 1$ and 1 rupee note as $4x + 3$.
- The total value will be $4x + 3 + 5(2x+1) + 10x$ or $24x + 8$, option 2.

Do not reject Arithmetic questions based on length – if you do not have time at the beginning you will not have time at the end! Read and reject only if the logic is complicated.

Arithmetic questions are going to be staple of every test you take. So you have to step up your game as far as this area is concerned.

If Arithmetic is a problem then it follows that your English and your Logical Reasoning is a problem, making the odds of you clearing the test really tough. So if you are a Number Systems person who does not like Arithmetic then it is time you remove your bias, practice Arithmetic and start scoring!

QUESTION 5: NOW (3 min)

They have given a simple case of the roots being equal, the coefficients being positive and in AP and they have asked for the sum of roots. So only a few steps to the answer.

If roots are unequal then a quadratic is written as $(x-a)(x-b) = 0$. Since the roots are equal it should be $(x-a)(x-a) = 0$ or $x^2 - 2ax + a^2 = 0$.

Since the coefficients are in A.P $-4a = a^2 + 1$ or $a^2 + 4a + 1 = 0$ or $(a + 2)^2 - 3 = 0$ or $a + 2 = \pm\sqrt{3}$ or $a = \sqrt{3} - 2$ or $-\sqrt{3} - 2$.

Since all the coefficients of $x^2 - 2ax + a^2$ are positive, $-2a$ should be positive hence a has to be $-\sqrt{3} - 2$ and the sum of roots is $2a$ or $-2(\sqrt{3} + 2)$.

If some of you marked this as LATER it is fine but the key thing is that it is not a question to reject.

QUESTION 6: LATER (< 1 min.)

Since this question involves a could not be situation I know that I have to find a pattern and then substitute values. The logic is not complex so it can be done later.

QUESTION 7: NOW (4 min.)

This is the kind of Arithmetic question that you need to crack to move up to the next level in terms of scores.

The key to cracking a long Arithmetic question is to wait till the end. They will make the question seem heavy in the beginning in order to either scare test-takers away without reading or make them lose interest mid-way. If you reach the end keeping your logical bearings intact you will see that in the end they really simplify it for you.

They have given the price of flight and first AC tickets in terms of second AC, tickets — $2x$, $1.3x$, x .

Flight tickets have discounts based on number of tickets bought (this information takes up a lot of lines but can basically be skimmed through)

This question right at the end mentions that the total amount spent and the number of tickets purchased is same for flight tickets and first AC tickets.

If both Total Amount and Number of Tickets is the same then the price has to be the same for both — $1.3x$ — since there is a discount on flight fares based on number of tickets bought and first AC fares cannot be increased!

So you know that all you need to do is find the number of flight tickets bought based on the discounts.

If the price of tickets fell from $2x$ to $1.3x$ then the discount percent was 35%.

The discounts are

- **First 10 – 0**
- **Second 10 – 10**
- **Third 10 – 20**
- **Fourth 10 – 30**
- **Fifth 10 – 40**

So if you buy 50 tickets the average discount will be 20% since as you can see there are 10 tickets in each slab and the discounts percentages are in A.P so you can take the middle value (if they were not in AP you can take the simple average as the number of tickets in each slab is the same).

Above 50 the discount is 50%. So by buying

- **50 tickets at 20%**
- **X tickets at 50%**
- **the total discount is 35%**

If you see 35% is a simple average of 20% and 50% this can happen only if the number of tickets bought at 20% and 50% are the same! So there are 50 tickets at 20% and 50 tickets at 50% so a total of 100 flight tickets.

(What if the resultant was not a simple average? Always use the see-saw concept and nothing else for alligation and weighted averages)

100 flight tickets and 100 first AC tickets at $1.3x$, making the total amount $260x$, which means at x per ticket 260 second AC tickets could have been bought.

QUESTION 8: NOW (3 min)

This is again a problem where you can see clear steps to the answer. When you read the question you know that you need to maximise the value of $y^3 \cdot x^2$. This can be possible only giving y the higher value since it has the higher power. The values of x and y have to be from 1 to 9 since $x + y = 10$. So all you need to do is to try out values.

When listing values do not just take any numbers randomly. Start from one end of the list and work your way to the other. This will ensure that you do not miss out on some values.

So you should start from one end (9,1) and then move on to (8,2) (7,3), (6,4) and (5, 5). There is no point checking for values of y lower than x since that will not maximize the function.

You will get (6,4) and 3456 as the answer.

QUESTION 9: LATER, < 1 min

While it is easy to figure that using these 4 numbers you can form $4!$ or 24 numbers it will be a bit time-consuming to find the sum of these 24 numbers. Also since there is a chance of making a silly mistake by not considering a case it is best to return to this later.

Ideally, you should have spent about 15-20 minutes and got 5 questions right, 15 marks. Even if you spent 12 minutes and got 3 questions right, 9 marks, it is a decent showing.

SET 2: On this set try to do the classification not as you usually do but as per the strategy outlined so far.

SimCAT 5 QUANTITATIVE ABILITY

- 10) Three distinct numbers are simultaneously selected from the set {1, 2, 3, 4, 8, 9, 16, 27} at random. The numbers so selected are arranged in the ascending order. What is the probability that the three numbers are not in GP?
- (1) 3/28 (2) 13/28 (3) 25/28 (4) 5/56
- 11) A function $f(x) = ax^2 - bx + c$ ($a > 0$) is such that $f(6)$, $f(9)$ and $f(11)$ are in arithmetic progression and $f(4) + f(5) + f(6) = f(7)$, for what values of x will the function be negative?
- (1) $x > 4, x < 0$
(2) $-3 < x < -2$
(3) $2 < x < 3$
(4) None of these
- 12) If $a^3 + b^3$ is either 1729 or 4104, and $a & b$ are both positive integers ($a > b$). How many pairs of (a, b) are possible?
- 13) A quadratic equation $ax^2 + bx + c$ ($a \neq 0$) is such that the sum of its roots is 5 less than the product of the roots. If both the roots are positive and one root is twice the other root, what will be the product of the roots?
- (1) 25/2 (2) 21/2 (3) 15 (4) 29/2
- 14) A, B & C are partners in a company X with a total investment of \$84000. At the end of one year the profit in the company was distributed in the following way: 1/3 of the profit was distributed between A and B in the ratio 4:3; the remaining profit was distributed equally among the A, B & C. If B's share of the profit is \$9200, then what was total profit of the firm as a percentage of the investment?
- 15) ABCD is a rhombus, with $\angle DAB = 120$ and side 'x'. If a rectangle PQRS is drawn such that its diagonal is equal to the longer diagonal of the rhombus and if the sides of the rectangle are in the ratio 3:1 then the what will be the smaller side of the rectangle in terms of 'x'?
- (1) $2x$ (2) $(\sqrt{3}/10)x$ (3) $x\sqrt{5}$ (4) $x/\sqrt{3}$
- 16) In how many ways can 7 chocolates of type A, 6 chocolates of type B and 5 chocolates of type C be distributed among 4 children such that each child receives at least one chocolate of each type?
- 17) Milk and water were mixed in a certain ratio. When the mixture was sold at the price of milk, the profit obtained was Rs. 70. When the mixture was sold at the price of water, the loss incurred was Rs. 56. What is the ratio in which milk and water was mixed?
- (1) 5 : 7 (2) 4 : 5 (3) 5 : 4 (4) Data insufficient
- 18) The life guards at Aksa beach spotted an unconscious man flowing downstream along the water towards the beach at 1m/s. They immediately set sail on their power boat upstream at a speed of 25m/s. As soon as they reached the man, they stopped the boat. It took them 14 seconds to bring him to consciousness inside their boat while the engine of the boat stopped and the boat itself was flowing downstream towards the shore at the speed of the water current. Immediately after the man regained his consciousness, they sailed at their original speed downstream and were able to return to the shore in 41 seconds. At what distance had the lifeguards initially spotted the man?

QUESTION 10: NOW (3 min.)

Do not leave probability, P & C or counting questions just because they are thought of to be tough. This paper had a few of both, we left a few for later and we choose to do a few. Let the question tell you and not the topic!

In this one you now that you can choose three numbers in $8C3$ or 56 ways. Now the number of ways can you not form GPs is huge.

One of the standard ways of doing probability questions if you cannot calculate the probability of x happening is to find the probability of x not happening and subtract it from 1 to get the required probability.

This rule has to be used as a strategy as it is the case in this problem. We can find the number of ways of forming GPs using 3 numbers.

Even in this question do not randomly looking at the set and start forming combinations, start from one end and work your way to the other.

Start with (1, 2, 4) then the next one with 1 can be (1,3,9), (1,4,16), then move on to starting with (2,4,8) then (3,9,27) and (4,8,16).

There are thus 6 ways out of 56 of forming a GP, the remaining 50 are thus the number of ways a GP cannot be formed, the probability of which is hence $50/56$ or $25/28$.

QUESTION 11: LATER (< 1 min.)

While the steps in this problem are definitely clear there are too many of them to take up at this point in time, so it is better to leave it for later.

QUESTION 12: LATER (< 1 min.)

If 1729 and 4104 evoke some cubes in your mind then you can try this problem; 1729 rang a bell since 1728 is 12^3 but 4104 did not, so I left it for a later.

QUESTION 13: NOW (2 min.)

This is an absolute sitter that has to be done now. Just remember the golden rule with such problems that give you chances to form equations. Do not start before you reach the end, you will end up taking up the wrong or inconvenient variables; the answer is option 1.

QUESTION 14: NOW (2 min.)

This is again an absolute sitter that has to be done now since you can see the steps to the answer — you just need to form one equation and equate it to \$9200 to determine the profit and then the profit percentage.

A small trick with problems involving ratios is to take convenient variables for the unknown. So do not rush to take profit as x , it is easier to take $1/3$ of the profit as $7x$ with B getting $3x$ since A and B are in the ratio 4:3. This will help avoid unwieldy calculations. The answer of this one is 30%

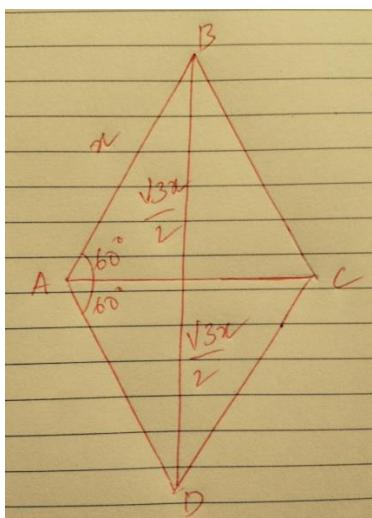
QUESTION 15: NOW (3 min.)

The big *Geometry* leave! Most students will leave this question without batting an eye lid

- Oh rhombus, I don't know what a rhombus is!
- rhombus and rectangle together, better leave

We are 3 months away from the test and if you still do not know what a rhombus is then I am afraid you are really wasting your chances. Also you cannot wait for the Geometry class to happen so that then you can learn what a rhombus is! You have the books with you and as I have mentioned in previous posts, just brush up the basics quickly.

Those who know what a rhombus is will know that the only difference between rhombus and square is that in a square all angles are 90° but in a rhombus they are not; the two sets of opposite angles are equal.



If the sides of the rectangle are a and $3a$ then the diagonal is $\sqrt{10}a$, this is equal to the diagonal of the rhombus $\sqrt{3}x$, so $a = (\sqrt{3}/\sqrt{10})x$!

Not doing this problem can only be termed as willful donation of marks. I know social work is good to have on your resume but don't donate marks!

QUESTION 16: LATER (< 1 min.)

This is not a straight forward P & C question and might take time, so better done later.

QUESTION 17: LATER (< 1 min.)

While it seems like a mixtures and alligations problem there is actually no resultant here. No values are given so everything has to be a different variable, using which we have to form two equations and try to solve it from there. So better left for later.

QUESTION 18: NOW (4 min.)

Yet another long Arithmetic problem that test-takers would have left just looking at the size. But invariably long questions have a huge give away at the end, all you need to do is follow the story. The reason you need to solve this problem is that the entire information is presented to you and you just need to execute the steps. You do not need to take anything as X!

Let the A and D be the initial positions of the body and the rescue team. You need to find the distance AD

Let them meet at B, from B to C the boat floats at 1 m/s for 14 seconds while they resuscitate the body so $BC = 1 * 14 = 14m$

From C to D they come back at $(25 + 1)$ m/s in 41 seconds, $CD = 26 * 41 = 1066$. So, $BD = BC + CD = 1080m$.

$AB = AB + BD$, so all you need is AB, which is the distance the body floats for, while the rescue team covers the distance BD. If $BD = 1080$, the rescue team would have covered that distance at $(25-1)m/s$ in $1080/24 = 45$ seconds. In these 45 seconds the body would have floated at 1m/s, 45m. So $AB = 1125m$

Again these are 3 marks that you will get if you invest that 3-4 minutes.

Again another 15-18 minutes and 5 questions, 15 marks. At the least 12 minutes, 9 marks.

SET 3: See if you can put all your learnings so far into selecting the right question.

SimCAT 5 QUANTITATIVE ABILITY

19) The equations of three sides AB, BC and AC of $\triangle ABC$ are $5x - 3y = 3$, $x - 8y = 45$ and $4x - 5y = -5$ respectively. D and E are the mid-points of sides AC and BC respectively. Find the equation of DE.

- (1) $6x - 10y = 43$
- (2) $11x - 5y = 44$
- (3) $10x - 6y = 43$
- (4) $5x - 11y = 44$

20) If a, b, c are the roots of the equation $x^3 + 8x^2 - 15 = 0$, find the value of $1/(a^2-bc) + 1/(b^2-ac) + 1/(c^2-ab)$.

21) A two-digit number is the average of its reverse and 80. What is the sum of the squares of its digits?

22) A cube is painted red on all sides. It is then cut into 8 identical smaller cubes. All unpainted areas are painted blue. Then each cube is further cut into 8 identical smaller cubes. All unpainted areas are painted green now. What is the ratio of the total areas painted red, blue and green?

- (1) $1 : 2 : 1$
- (2) $1 : 2 : 2$
- (3) $2 : 1 : 1$
- (4) $1 : 1 : 2$

23) Find the value of $3^{\log_9 4} + 2^{\log_{18} 81}$

24) How many factors of 1080000 are not divisible by 40?

25) In how many ways can 3 identical Physics books and 3 identical Chemistry books be arranged in a row such that all Chemistry books are together?

- (1) 144
- (2) 4
- (3) 24
- (4) 20

26) The largest possible square is inscribed in a circle. The largest possible circle is inscribed in this square. The largest possible square is inscribed in the smaller circle. This process is repeated infinite times. What is the ratio of the sum of the areas of all the circles to the sum of the areas of all the squares?

- (1) π
- (2) $\pi/2$
- (3) $\pi/4$
- (4) $\pi/8$

27) Afzal lent Bilal a certain sum of money which is equal to the sum that Bilal lent to Chirag. Bilal vowed to return the money to Afzal at the end of 60 months with simple interest at the rate of 7.5% p.a. Chirag vowed to return the money to Bilal at the end of 90 months with simple interest at 10.5% p.a. If Bilal eventually earned Rs. 825 through these transactions, what sum did he lend to Chirag?

28) If the points $(2, 1)$, $(x, 10)$ and $(10, y)$ are collinear and $xy = 104$, which of the following points cannot be collinear with these three points?

- (1) $(4, 4)$
- (2) $(6, 7)$
- (3) $(18, 7)$
- (4) $(14, 7)$

QUESTION 19: NOW (1 min.)

Again a big leave since it seems to be **Geometry plus Co-ordinate Geometry!** This is the easiest question in the whole paper you need not even do any calculation!

Equations of three sides are given, DE is the line joining the mid-points of two sides, BC and AC, and hence it is always parallel to the third side, AB, and half of it.

And what do we know about equations of parallel lines?

The parts involving the variables are just multiples of each other, since they have the same slope and they will differ only in the value of the constant.

So all you need to look for is a multiple of the equation of AB, $5x - 3y = 0$, only option 3!

QUESTION 20: LATER or NEVER

If you know the rules governing polynomials, you should do it later since it you cannot see the steps at this point, you will only know once you get it, else leave the problem.

QUESTION 21: NOW (2 min.)

You can see that all you need to do is to formulate a simple equation taking the number as xy, so you should do it right away. The answer is 145.

QUESTION 22: LATER (< 1 min.) or NEVER

If you have good visualization skills you should do it later since it will take some time and there is a scope for error, else leave.

QUESTION 23: NOW (2 min.) or NEVER

If you know the rules governing Logarithms then you should do it now since it is a very simple construction, else leave; the answer is 5.

QUESTION 24: NOW (3 min.) or NEVER

Either you know the rules governing factors, in which case you should do it else better left alone; the answer is 76.

QUESTION 25: NOW (< 2 min.)

This is the simplest P & C problem possible. You just need to group all Chemistry books together and take them as one unit, making the total 4 books. If all Physics books were different then the answer would have been $4!$. But the 3 Physics books are identical, making the situation similar to a 4-letter words with three letters repeating and hence it has to be $4!/3!$.

QUESTION 26: NOW (2 min.)

This is a very, very standard problem. When squares and circles are infinitely inscribed

- The area of each subsequent circle will be half the previous one since the radius becomes $r/\sqrt{2}$
- The side of the first inscribed square is always radius of circle multiplied by $\sqrt{2}$.
- The subsequent squares will have an area half the previous one.

So if area of first circle is πr^2 then the subsequent ones will be half of that, so its an infinite GP with common ratio $1/2$, the sum of which is $a/1-r$ or $\pi r^2/(1-1/2)$ or $2\pi r^2$.

For the square area of the first one will be $2r^2$, the sum of all squares again follows the same pattern, $2r^2/(1-1/2)$, $4r^2$.

The required ratio will be $\pi/2$.

QUESTION 27: NOW (2 min.)

The steps cannot be clearer than in this problem. all you need to do is calculate the interest paid by Chirag to Bilal and the interest paid by Bilal to Afzal, both are simple interests. You can get the difference and hence the profit. The only trick is to convert those interest rates into fractions $21/2$ and $15/2$ so that calculation becomes easy; the answer is Rs.2000.

QUESTION 28: NEVER

The problem involves too many calculations of taking different sets of points and seeing where slopes become equal. So it will end up being too time-taking and hence better left alone.

So in these 9 questions you can do 5 questions and get 15 marks in 15 minutes. Even if you leave questions, you can still get 9 marks in under 12 minutes.

The QA cut-off for this SimCAT was 27.

If you did at least 3 questions(and left the rest quickly) in each set you should have cleared the cut-off at this point by spending about 35 minutes.

If you did 5 at this point you will be at 45 marks with 15 minutes left.

SET 4: Since you are reaching the end you should be absolutely spot on with your selection and do only sure-shot questions.

SimCAT 5 QUANTITATIVE ABILITY

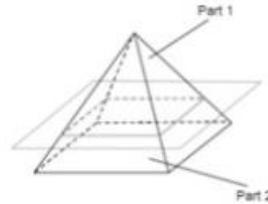
29) A and B start driving from points P and Q respectively towards each other at speeds in the ratio 5:4. They meet somewhere between P and Q and cross each other. After reaching the opposite point, they immediately turn around and again start driving towards each other. They do this again and again. At how many distinct points will they meet?

30) Container J contains a homogenous mixture of two liquids A and B in the ratio 3:7. The entire contents of container J is divided into two containers K and L in the ratio 5:8. The entire contents of container K is divided into two containers M and N in the ratio 3:7. The volume of liquid A in container M is 45 ml. What was the volume of liquid B in container J?

31) 3 men and 4 women together finish a certain job in 11 days. However, all of them did not work for all the 11 days. The ratio of the number of days that the 3 men and 4 women did not work is same as the ratio of the efficiency of 1 man and 1 woman. What is the ratio of the number of days that the 3 men and 4 women worked? Note: Either all three men worked together or didn't work together. Similarly, either all four women worked together or didn't work together. It is also known that 5 men working alone can complete the entire job in 3 days and 2 women working alone can complete the entire job in 12.5 days.

- (1) 5 : 3
- (2) 1 : 5
- (3) 3 : 5
- (4) 5 : 1

32) A square based pyramid is cut horizontally into two parts as shown in the diagram. The ratio of the height of the original pyramid to that of the new pyramid is equal to the ratio of side of square of the original pyramid to that of the new pyramid and the volume of the new pyramid is $\frac{1}{8}$ the volume of the original pyramid. What is the sum of the surface areas of part 1 to the sum of the inclined surfaces of part 2?



- (1) 2:1
- (2) 3:1
- (3) 1:3
- (4) 2:3

QUESTION 29: NEVER (< 1 min.)

Since it involves counting the distinct points along the road it would involve drawing and also the possibility of making a mistake, hence better left alone

QUESTION 30: NOW (3 min.)

Again a big giveaway at the end about how much A is in container M, if you read through. You do not need to calculate how much A and B are there in each container since they will always be there in the ratio 3:7.

You calculation will become easier if you take the amount in J as 130 since it is divided in the ratio 5:8 into K and L making the portions 50 and 80 and then M and N will have 15 and 35. M will have $\frac{3}{10}$ of 45 or 4.5 ml of A, which is given as 45, so the original solution should also be 10 times or 1300 out of which 70% or 910 is B.

QUESTION 31: NEVER (< 1 min.)

Too many knots to try at this stage of the test, no clear path to answer better left.

QUESTION 32: NEVER (< 1 min.)

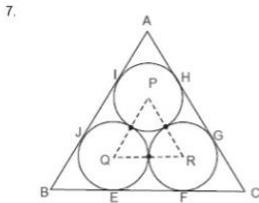
Involves knowledge of pyramidal figures and visualization better left alone at this point.

So on these 4 questions around 5 minutes and 3 marks.

SET 5: The last two questions

SimCAT 5 QUANTITATIVE ABILITY

SimCAT 5 QUANTITATIVE ABILITY

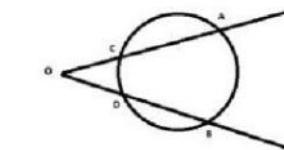


In the diagram, three circles having equal radii and with centres P, Q and R are shown. Each circle touches the other two circles at exactly one point. Three tangents are extended and they intersect at points A, B and C. What is the ratio of areas of $\triangle ABC$ and $\triangle PQR$?

1. $(\sqrt{3} + 1) : 1$ 2. $3 : 1$ 3. $(\sqrt{3} + 1)^2 : 1$ 4. $(\sqrt{2} + 1)^2 : 1$

- (1) 30
(2) 45
(3) 60
(4) 90

If $\ell(AO) = 24 \text{ cm}$, $\ell(OC) = 3 \text{ cm}$, $\ell(BD) = 14 \text{ cm}$, $A(\triangle COB) = \frac{27}{\sqrt{2}} \text{ cm}^2$, what is $m\angle AOB$ (in degrees)?



QUESTION 33: NEVER (or Reverse Sweep)

At this stage unless you have no questions marked you should not get into drawing and attempting this question before you have done the marked ones.

I always have a fondness for symmetric figures since one can trust one's eye sight and approximate. Circles are as symmetric as they come and they can be fully circumscribed only in symmetric triangles — equilateral.

But to do that I first need to know how much leeway I have to approximate — how far apart the answer options are.

A quick calculation will give you the answer options as — 2.73, 3, 7.29, 5.76 — far enough to take a swing.

So I took the radius if the inner circles as r , making the side of the inner triangle, PQR, $2r$.

Now I need the side of the outer triangle. I decide to estimate it, from its altitude, the line that passes through, A and P and touches BC.

I take it as $2r + 2r + r$.

- $2r + 2r$ – the heights or diameters of the two circles
- r – the small part that is left over at the top, between the circle that contains P and the vertex A. I know I am taking only a marginally higher value since to the naked eye it is almost the same.

So if the altitude of the outer equilateral triangle is $5r$ then the side will be $2/\sqrt{3}$ times it, or $10r/\sqrt{3}$.

The ratio of the sides of outer to inner triangles will be $(10r/\sqrt{3})/2r$ or $5/\sqrt{3}$, so ratio of areas will be a square of that or $25/3$, around 8, and you know the highest option is 7.29 or option 3!

QUESTION 34: NEVER

One will not only know after one gets into the problem, hence better left alone.

A score of 45 was definitely possible on this test, some of the questions that I marked for later are relatively simple and some of the questions that require knowledge of specific concepts are also very do-able – 1, 6, 17, 23 and 24.

It might be that some you might disagree with the choices I have suggested but as long as you did not get stuck on any question and managed a score above 45, you are fine. If that has not happened then it means that you have to rework your strategy.

Geometry & Arithmetic can be big scoring areas

In this test there were 16 questions from Arithmetic and Geometry of which I suggested that 10 should have been done. If even that is a bit unrealistic at least 8 of them were there for the taking – 24 marks from these two areas alone.

In another test may be there might be more marks to be gained from Numbers and Algebra. But one thing is for certain, questions will get divided across all areas and unless you are conversant across all areas you will be always leaving questions that should have been taken.

What prevents you from scoring is not the question but your perception of it

Through this exercise you would have realised that in most cases the questions that you left were in fact do-able and the ones that you entered, a few of them would have sunk your time.

This is because we are never really reading the question for what it is. We are looking at all the outer trappings of the question and making a decision about the same.

Do not judge a question by its wrapper, look beyond it and into the logic of the question and that will tell you the truth about the question.

May be this applies to our evaluation of people as well.

This might seem like a tall order but it isn't. It just means that your head should be absolutely still while reading the question and the processing will automatically happen from that centre of stillness.

What you need is to do though to achieve that stillness is to first remove all the notions, biases, strategies that you have force fitted into your head.

The area you love the most, can hurt you the most

All of us have our favourite areas and sometimes it can be our favourite areas that can hurt us the most in terms of time.

Since we are so attached to some areas we get sucked into some tough problems since we feel it is a variation of something we have done or we feel that it can be solved using a particular technique; this is unavoidable. But what you should avoid at all costs is getting too attached at that point and waste time trying to solving the question again from the beginning.

You have to be aware at all points of the most precious commodity in an aptitude test – time.

In the next post I will take the ways and means by which you can increase your QA speed.

Use the comments tool to ask any doubts that you might have in the questions we took up in this post or point out any typos; this has turned out to be a super-long post!

CAT 2017: How to improve your QA percentile – Part III

In the previous two posts we took at a look at the first two building blocks to increase your score and percentile on CAT Quant — Accuracy & Question Selection. In this post we will look at the third building block — if the first two blocks provide the impetus towards the higher score, this block is the one from where you take off towards a higher score — Speed.

Increasing your speed but at least 2x is a function of changing three things in the way you execute a solution:

- increasing your number crunching muscle
 - reducing your dependence on writing extensively
 - viewing problems through an alternative lens
-

Increase your number crunching muscle

Find $(1^2 + 3^2 + 4^2 + 5^2 + 7^2 + 8^2 + 9^2 + 11^2 + 12^2 + 13^2 + 15^2 + 16^2 + \dots + 49^2) / 1249$ if it is an integer. (TITA)

This is a question from a SimCAT and most people would have let the question go. Upon reading the solution, they would have become doubly sure that it was a good leave.

But as we have often seen in T20 cricket, guys with huge reach and immense power can send balls, which can be potential dot balls to other batsmen, sailing into the crowd.

I decided to take on the above problem using some number crunching muscle

Firstly, I knew that this numerator was the sum of the first 49 squares minus the even squares— we just need to substitute $n = 49$ in the formula, $n(n+1)(2n+1)/6$ and minus the sum of the missing squares.

$49 \cdot 50 \cdot 99/6$ can be reduced to $49 \cdot 25 \cdot 33$ which can be approximated to be $50 \cdot 25 \cdot 33 = 1250 \cdot 33 = 12 \cdot 3 = 36$ so a value greater than 36000, also this has to end in a 5 since it is $49 \cdot 25 \cdot 33$.

If I ignore the values that need to be subtracted and look at the denominator 1249, I know the answer has to be 35 since the value is greater than 36000 and has to end in a 5, 1249 has to be multiplied by a number ending in 5 to get a value ending in 5.

But the catch is that some values are missing from the sum of squares, which I promptly listed:

$$2^2 + 6^2 + 10^2 + 14^2 + 18^2 + 22^2 + 26^2 + 30^2 + 34^2 + 38^2 + 42^2 + 46^2$$

We can quickly estimate the last digit of the sum of these terms — 4,6,0,6,4,4,6,0,6,4,4,6 — 0, so even after subtracting the value has to end in 5 and hence the answer has to end in 5, so if without subtracting it is 35, then after subtracting it has to be 25, 15 or 5.

I set about quickly estimating the value of the above terms by starting from the right end since the squares of the larger number will make up most of the value and the smaller ones can be effectively ignored.

I am writing the approximation as I processed it mentally:

- $42^2 + 46^2$ = Two 40s, more than 1600, 1600, so around 3500
- $30^2 + 34^2 + 38^2$ = Three 30s = more than 1000, 1000, 1000 = around 3500
- $22^2 + 26^2 = 400, 600$ = more than 1000
- $2^2 + 6^2 + 10^2 + 14^2 + 18^2$ = less than 1000

So from a value greater than 36000 I need to subtract around 10000 so it will be around 26000 and hence value greater than 26000 ending in 5 when divided by 1249 to give an integer has to yield 25 since $12^2 = 24$ and $12^3 = 36$

Thinking is always faster than writing so the actual time that I took for this crunching process was under 2 minutes.

Given that the CAT is a test of speed, what matters is not knowing how to solve but how quickly you can reach from knowing how to solve to the final answer.

This can only happen if you have some serious number crunching muscle — extensive conceptual clarity cannot compensate for this muscle. You need to ask yourself

- when the clock is ticking and you are executing a solution, can you break them numbers down or will you buckle under their load.
If your answer is sometimes I can crack, sometimes I buckle or most often I buckle, then you are not yet in shape to take the CAT. But you have three months to build some serious muscle by memorizing all of these:
 - all squares from 2 to 30
 - all cubes from 2 to 12
 - all powers of 2 from 1 to 12
 - all powers of 3 from 1 to 6
 - all fraction and equivalent percentages from $1/2$ to $1/11$
 - tables from 2×10 to 20×10
- Most of you want to do an MBA so that you can do quality, high-paying work. If that is the case then you should approach the 180 minutes of the CAT in a such a way that we do only quality work during the 180 minutes of the test.
- Do you want to be calculating 29^2 , if it is the answer to a TITA question.

- Do you want to be calculating the value of 2 raised to 8 by starting with 2 raised to 5 in the middle of a problem?

All of these values should already be fed into and so deeply embedded in the system, that there is not gap between retrieving and executing the solution.

In short you need to be the calculating equivalent of a T20 big-hitting beast.

Reduce your dependence on writing extensively

Writing and executing the entire solution of a problem is the biggest speed-breaker or decelerator in front you. Each one of you will have varying degrees of dependence on writing. Sometimes, the more diligent the aspirant, the more steps he or she will write (systematically and without clutter) while solving a question.

The problem is that this method will result in fewer than 15 attempts in 60 minutes and when coupled with a few mistakes will end up in a percentile that is perennially hovering in the 85 range.

So if you are among those who write diligently then you need to drastically change your approach to increase your percentiles and understand than

- you are used to writing because you are used to submitting homework
- you are used to writing because missing steps can mean fewer marks being awarded
- you are used to writing neatly because so far good, clutter-free writing fetched you higher marks

None of the things listed above apply to CAT Math – just like none of the rules of test cricket apply to T20 – no marks for handwriting, no marks for steps

How do you decrease the amount of writing you do? Start with the following steps

- do not duplicate information from the screen on to your rough sheet
- *a man does a piece of work in 20 days*, then do not write 20 or $t = 20$ on your paper, you are just executing robot-like steps without getting any closer to solving the problem
- do not write what you need to execute
- if you need to calculate the average of five numbers then there is no way you are writing 5 numbers with plus sign and then drawing a line underneath them and writing a five; you need to just get adding and dividing without writing anything
- start skipping steps by executing intermediate steps mentally
- if you have to solve $1/(x+1) + 1/(x+2) = 2$, then may be the next step you should write is $2x + 3 = 2x^2 + 6x + 4$

This is easier said than done though since we have been conditioned over years to equate writing with thinking and solving, so like the famous dog of Pavlov, we start writing the moment we start reading a problem.

To practice the above steps consciously you should try a few special practice sessions.

- Take a section test or an area test or the Quant section of a take-home SimCAT with your hands folded or your palms locked in front of you.
 - Have a pen and paper handy on the table to write only if the need arises
 - Force yourself to execute a few steps mentally
 - Do not be bothered about time running out, do not be bothered about the score
If you do not try out these things during practice you will keep doing the same thing over and over again and keep expecting different results, which alas is a *non-sequitor* (CR enthusiasts should check what this means).
-

Viewing problems through an alternate lens

The above heading might seem as if there is a standard lens and there is an alternate lens. In fact nothing could be farther from the truth. What always matters is the most optimal solution to a problem. Why do we not find the optimal solution?

Reject the formula-first approach

Our gut reaction to solving a problem is to try to immediately fit it to a formula. In fact when faced with a question we immediately ask ourselves — what formula do I know that can help me solve this.

A formula is only one of the tools that you will use to reach the solution that you have devised; they are similar to a surgeon's or a mechanic's tools. A surgeon does not decide on the kind of surgery to be done based on the tools he has, neither does a mechanic decide on how he is going to fix a vehicle based on the tool he has!

So do not make formula-fitting your first step.

Do not algebraify a problem by force

If we do not go to a formula, we start taking the first thing we encounter as X and we try to form an equation.

We feel that if we can convert English into Algebra, we have done our job but Algebra is just another language like English. What you have to convert it is into logical language, which still be in English that uses words or Algebra that uses symbols.

Do not convert all problems into Algebra, especially the *Arithmetic* ones.

Move to the question first approach

Put the question and what is finally asked in the question as the first and most important thing. Work backwards from there to determine what you really need instead of trying to build towards the answer from the first bits of information.

Do not treat the given information passively

On most good questions, the given information itself hold more information that meets the eye, provided you are willing to at least turn it over in your palm to see a small latch that you can pull.

If you take it just the way it is and do not try to even squeeze a wee bit or cut it then a lemon is as good or bad as a stone or softball (in fact not even as good as those).

The methods we know of are a function of the teachers we have had

We ar more or less a function of what we have been taught and made to do; there are always a very small few who can see things by themselves but there are a great many who can do much better than what they if someone points the way.

How many really high-quality teachers have we had (and I do not mean by good because of their nature; I will prefer a horrible person who teaches stuff with fresh eyes to a good human being who teaches stuff in the most mundane of ways; there a few who combine the best qualities of the two types and I have had the pleasure of knowing two of them) ?

I started looking at problems differently after I encountered my colleague pulling off some amazing solutions (go through all of them); it did not feel like it was way above my league since it was more a question of approach and attitude rather than some genius intuition (which he does have) because it was something that was easily understood.

I figured that it was more about my ability to let go of my conditioned responses and less about my ability to find alternate solutions.

To find a new road, you have to first get off the old one!

How to manage your 180 minutes

We have reached the last stretch now. We have done enough concepts, practice & strategy. We have now crossed an invisible frontier, we have moved from the general to the specific, from what is outside of you to what is inside of you, to that space between your ears.

Those who have taken the CAT before will attest that how well you manage your 180 minutes, how well you react to tough set or a section, how well you are able to execute Plan A or switch to Plan B, everything, depends on how well you manage the space between your ears.

So let's take it section by section, let's look at each of the 60 minutes, let's look at what you need to do right, what you need to watch out for and most importantly what can go wrong.

Managing 60 minutes of Verbal Ability

The Goal — *To Maximize Accuracy*

Whether one is good or bad at Verbal Ability, the single-point agenda for this section has to be to maximize accuracy — the specifics of which are discussed in two detailed posts earlier.

The first thing you should decide before starting the test is which area you will start with RC or VA. I am sure most of you would have that decided by now.

What can go wrong?

Hi, I am a new question type!

The Verbal section of the CAT has always been the one that has most regularly thrown up some variety. Every two years or so they have thrown in a new question type; the last new type being the incorrect sentence in context.

So do not be surprised if you encounter a new question type right at the beginning of the test.

Firstly, do not panic — *new need not mean difficult*. Like it is the case with existing question types, if there are 3-5 questions, 1-2 will be easy 1-2 medium and 1-2 tough.

Secondly, do not be in a hurry to quickly read the directions and greedily read the question and options. Take time to read the directions, understand the question type before you jump into solving the question!

Thirdly, if you are not able to get your head around the first question do not skip the whole set thinking I will deal with this later, remember that there will be do-able questions.

Who chose these RC Passages?

For most test-takers, success on RCs is directly linked to their comfort level with the content of the RCs.

But what if 3 out of 4 passages are on topics that are not to your liking?

Do NOT

- panic
- react negatively
- attempt questions half-heartedly or worse
- decide to somehow solve all VA questions!

Doing this would mean self-sabotaging the 60 minutes of your Verbal section. Instead,

- steel yourself to the reality that it is going to be testing time
- take your concentration levels up a notch
- follow the process for RC that we discussed in the previous posts or what works for you
- attempt judiciously, let go or mark for later the questions on which you cannot break the deadlock between two options

Go into the CAT, expecting this to happen. As they say, *hope for the best, prepare for the worst.*

Five minutes of madness at the end of the section

You do what you can and reach the end of the Verbal section. You take a look at the number of attempts and see that you have attempted 15 questions.

What do you do? Decide to take things into your hands (in this case the mouse) and go mark, mark, mark!

Nothing could be more counter-productive. This is equivalent to committing hara-kiri. You are setting yourself up for disaster — *a poor sectional percentile*.

If you have answered the 15 questions properly, eliminating the options as per the process discussed in the previous posts and left out questions you were unsure of then there is no need to worry. The deduction is not that you have not done well but that the paper is tough.

A way to handle this would be to start with 50 minutes, divide it between RC and VA and have a 10-minute buffer at the end.

So if you find that you have not managed to attempt enough then use that to attempt a few questions not blindly mark options.

Your goal for this section is to maximize accuracy and the steps we have discussed are geared towards achieving the same.

Practice Tip: *Solve old CAT passages that you would otherwise not touch because of their content.*

Managing 60 minutes of DL & LR

The Goal — *To solve easy & medium sets of both DI & LR*

I have always maintained that CAT is primarily a test that rewards test-takers with all-around ability.

Test-takers with weaknesses in one of the 5 areas — VA, RC, DI, LR & QA — are always at the mercy of the paper with their performance hinging on encountering a paper that plays to their strengths. But are you not leaving your future to chance?

What can go wrong?

Killer LR – Where did my time go?

On average, most test-takers are comfortable with LR rather than DI, which is not a surprise since expertise on the former is an innate skill while on the latter it is an acquired skill.

This results in test-takers banking on solving at least 3 LR sets to see them through the cut-off for this section. They are willing to solve one DI set.

What if this is not possible to execute?

You get two do-able LRs that can be finished in 10 minutes each and two toughies. You have spent 20 minutes and solved two LRs.

Most would see this as good place to be in and then proceed to the next LR. But should you be attempting that LR in the first place? If you are good at LR you should recognize (based on the number of conditions and the nature of the information) that the set is better left alone!

In many cases those who are relying excessively on LR would enter that set and since solving only 2 sets is unacceptable to them they end up losing about 20 minutes on that one set.

What follows after that is predictable — try the last set for 5 minutes, desperately try every DI for 5 minutes and end the section in a panic mode.

This is not an unrealistic scenario. It has happened often enough for you to be wary of the script taking this turn.

- You are not going to put all your eggs in one basket.
- You are not going to waste a year of your life over one LR set.
- Even if you are Vishwanathan Anand's cousin, if a set needs to be left, it needs to be left!

Do not spend more than 30 minutes on LR until you have solved all the easy & medium DI sets.

What are the odds of a killer LR?

The IIMs have made their intention of getting more diversity in terms of educational background loud & clear. This year they have given a scientific calculator as well.

So after all of this, they are not going to make the DI crazily tough.

If anything they will make DI solvable and LR tough since they are not looking for diversity sans logical skills!

The DI-LR section is going to be the most crucial section on CAT.

How this goes is going to determine how you approach the Quant section. In terms of mental energy you will be a bit tired to say the least, if you are psychologically down as well then it is game, set and match before the Quant section begins.

So please ensure that you are prepared for the worst.

Practice Tip: Solve tough DI sets and watch the [DI videos on CAT-holics](#) if you have not already.

Managing 60 minutes of Quantitative Ability

The Goal — *To Choose The Right Questions*

Your big challenge will be to execute a great Quant section after of 2 hours of solving and maybe 5 hours since you left home.

For the same reasons that I expect the DI to not be that tough, I expect the Quant section to be of medium difficulty as well.

But how do you ensure that you maximize your performance in this section?

What can go wrong?

Unlike the 60 minutes of VA-RC and DI-LR, during which you will be operating in chunks of 30 minutes each, the 60 minutes of QA will be an uninterrupted stretch of 60 minutes.

Given the fatigue, it can happen that you let the section drift — you start well for about 15 minutes, drift for 20-30 minutes and then switch back on towards the end.

This is very much possible and you need to have a way to counter this.

What is the best thing to do?

Divide your Quant into two sets of 30 minutes each.

You will be tired so the best thing to do is to knock off the easiest questions first without spending too much energy in the first 30 minutes.

During this period do not get into questions which you know will take time — solving time not reading time! If there is an 8-liner Arithmetic question, read it, it might turn out to be a sitter.

Use the MARK button judiciously to single out questions for the second round so that you can return to the questions you are most likely to crack. If you MARK every question for later, it will defeat the purpose. In the second 30-minutes come back to the MARKED questions

If it is an easy paper this 30-30 split will not work since many questions will have to be solved on the spot and you will exceed the first 30 minutes. But that as you realize is a better problem to have!

Throughout the section just keep urging yourself to

- keep moving

- not get stuck
 - pluck the lowest hanging fruits first
- Practice Tip: *Solve section tests with this strategy.*
-

Having a good second serve is as important as having good first serve

The objective of this whole post was to make you aware of the all the speed-breakers and panic-inducers on the 180-minute stretch that is the CAT.

As prospective leaders/managers, one of the biggest qualities you will need to display over your career is the ability to soak up the pressure and face up to adversity. Having a great plan B is sometimes (not always) as important as having a great plan A.

So do not go into the test expecting a particular kind of paper and panic upon not finding it. That would be relying on hope and not on ability.

Go in expecting a few twists and turns and be prepared to navigate the same, visualize yourself doing the same.

The next post will be about that — *the power of visualization.*

What do you see yourself doing on CAT Day?

One of the biggest questions that you need to ask yourself is how do you think of yourself with respect to life?

- Do you think of yourself as an individual who makes life happen or to whom life happens?
 - Do you see yourself at the doing end of things or at the receiving end of things?
 - Do you believe or do you hope?
-

The most counter-productive thing of all

The answers to the question above will also reflect what your thoughts are currently as you look forward to taking the CAT this Sunday.

If you fall into the second camp on each question, then chances are that you are worrying about

- the paper turning out to be tough
- questions from all the areas that you have not touched turning up on CAT
- the kind of questions you were not able to answer in SimCATs turning up on CAT
- what will happen if you do not crack the CAT this year
- how you will face your parents and dear ones

While all of these fears are legitimate is there anything that worrying can accomplish?

For each of these questions ask yourself two questions

1. Should I be thinking about it right now or rather if I don't think about it right now or over the next three days will my life will be ruined?
2. If the answer to the above question is YES, then can I do anything to address the worry and solve it?

The only worry that you CAN address is the second one — by covering the most important formulas across all the areas/topics you have not touched so far.

All the rest are NOT in your hands and if you can't do anything about it then no point thinking about it.

Your future hinges on this test but then can you let your test performance hinge on your negative thoughts about the future?

Worrying does not result in anything, it is the most counter-productive activity of all things we can think or do.

The power of visualization

The thing about the mind is that its very nature is to attach itself to something, like a bee that is constantly buzzing about.

You CANNOT control it from buzzing (something possible for only short periods of time meditation).

You will be better-off DIRECTING it towards a correct single-point focus.

When faced with big days or occasions it automatically gets directed towards the enormity of the event.

This is not something that is unique to test-takers, this is something that everyone faces in life, especially sportsmen who have to face the pressure of performing at the highest-level.

The most successful sportsmen and sports teams have learned to direct their minds towards a particular goal and channelize the power of visualization.

Haven't we visualized our favorite sportsman leading his team to glory in the toughest of times?

Do we visualize him/her doing it in the easiest of situations? We always want him/her to battle and win the toughest of situations.

This is exactly what the biggest sports stars themselves do — they visualize themselves performing at the highest-level during clutch time.

Michael Jordan was known to rehearse the entire game as it would play out. Guess who read this in a book about Jordan, visualized and executed an innings that is now rated as the second-best test innings of all time by Wisden?.

In early 1999, Brian Lara returned as captain from South Africa, from a 0-5 drubbing. Before the tour was a pay dispute, after it there was just general despondency. Lara was put on probation as captain for the first two Tests against Australia, and Webster worked closely with the team, and Lara in particular.

Webster describes what Lara was going through then as “a process of self-sabotage”. Champions can sometimes go through such phases; every conceivable pressure piles up on them and bottles up the ability. It is medically proven that the stress affects vision and makes the reflexes more sluggish.

West Indies lost the first Test of the series, in Lara's hometown, Port-of-Spain, by 312 runs, after having been bowled out for a humiliating 51 in the second innings. Basically, West Indies cricket was crumbling around Lara – which means, also, that he was at the centre.

Around then Lara was exposed to a technique called Visualisation. Think of Visualisation as a mental rehearsal; like writing the plot – and the end – to a story that is still unfolding. At about the same time, Lara remembers, an old friend from school, Nicholas Gomez, presented him with a book on Michael Jordan. “He had an entire page on how he went about visualizing what's going to happen in a

game,” Lara recalls. In the series against Australia, an inspired 213 from Lara’s blade had won the second Test at Jamaica to square the series.

In the last innings at Barbados, the venue of the third Test, West Indies were chasing 308 for victory against McGrath, Gillespie, Warne and MacGill. Of course, it was going to be desperately hard. Lara played one of the great Test innings.

Lara had seen it all before it happened. “I remember calling Gomez at six o’clock in the morning, the last morning of the Test match, and we went about planning this innings against the best team in the world. It was amazing to see how it just came to fruition. You know, a partnership with someone – it happened to be Jimmy Adams – and the innings ultimately evolving into a match-winning one.”

— excerpted from [Rahul Bhattacharya’s article](#)

It is a [great video to watch](#), chasing 308 after being 105/5 with the last runs being scored in the company of arguably the worst #11 in cricket – Courtney Walsh.

What should YOU visualize?

The important thing to note is that in planning the chase with his friend in the morning, Lara kept it realistic. He knew that his team was prone to collapsing and the support of one other guy would be crucial. He did not imagine for himself a path strewn with flowers, instead, he imagined a road full of potholes and hoped for a good set of shock absorbers.

So over the next few days, you should visualize yourself doing the right things and overcoming obstacles instead of hoping and praying for an easy paper that falls to your strengths.

Talk yourself into doing the right things

This is what Martin Crowe, who was highly regarded by his peers both as a player and as a captain had to say about how the power of visualization can be harnessed to maximise performance. From my own perspective, my mind was often filled with thoughts, coupled with underdeveloped emotions. It wasn’t a great mix in which to take on the art of batting at the top level. My footwork was sure and a priority, yet I quickly realised that footwork and mind-work go hand in glove. I needed some mental crutches and so I sought out the new phenomenon of sports psychology to deal with an overflow of desultory musing.

I learnt techniques of visualisation, of playing the future out in the mind first, using pictures.

Most of all, I learnt to repeat affirmations one after the other (“Head still, head still, watch the ball, watch the ball”), slowly and deliberately, to block out any unforeseen random thought (“What if I get out?”) that might jump into my head and trip me up again.

If you see he did not visualize himself hitting Allan Donald for a six on a fast pitch; he did not set himself visions of grandeur. He focussed on the small things he should do right and the thoughts he should avoid.

Solving questions is very similar since every ball is similar to question and solving it successfully is about doing all the small things correctly.

What should you see yourself executing?

- Visualise yourself reading the question instead of skimming the question
- Visualise yourself not jumping to solve the question but taking a call whether to solve it or not.
- Visualise yourself doing the calculation part with the calmness required to not make silly mistakes.
- Visualise yourself dealing with the unfavorable turn of events that we listed in the previous post and dealing with them.
- Visualise yourself solving questions in the way you solve it at home — with relaxed nerves
- Visualise yourself staying calm in the face of a tough/adverse paper.

In [the same article](#) Crowe summarises things really well.

The key, from what I have learnt, from what I now believe, is that no matter your experiences and circumstances, your reality is in the present moment — what you are living in the feeling of your thinking in the present moment. That's your truest reality.

It is not the memory of what went before, or the concern of what may come in the future, that is real. In batting, it is the clear-minded thinking of watching and moving to the present ball being bowled that is real.

Fear of getting out is really an illusion, a negative thought with feeling added to it, about past failures and / or future ones. It needn't be there at all. The fact is, you will get out, so there is no need to fear it; simply delay the inevitable for as long as possible.

You can succeed if you clear away everything that's not to do with the present moment, the next ball, if you remove old baggage or concern about what might happen in time. Just think about watching the ball leave the bowler's hand. That's it.

Simplicity.

Perhaps Mahatma Gandhi says it best. “A man is but the product of his thoughts. What he thinks, he becomes.”

Forget the pressure to perform, it is an opportunity to perform

The crucial thing that we should never lose track of is this — you have an opportunity to perform.

Most of you have had the privilege of decent food, decent education, decent shelter. Some of you, I know, have had to struggle for these things. So now you have the opportunity to build a better career.

I have spoken before in class about real pressure and real lack of opportunity — migrant laborers waiting at various junctions during morning hours hoping that someone would bundle them into a truck and give them an opportunity to just earn their daily bread, just exist with dignity.

Most of us are lucky to have this opportunity. It is up to us to think the right things and make the right things happen.

This is not something that applies only to CAT-day.

It will apply even more after you enter a premier b-school — summer placements, final placements and most importantly life.

The biggest battle is always won in the space between the ears and you have to visualize and talk yourself into doing the right things and succeeding.

Are you ready for a real test?

From very early on in our lives we are exposed (or subjected) to this word called TEST. As we enter the higher grades the importance that TESTS play or are supposed to play in our lives steadily increases. If we look back, for most of us, tests have always been part of a trinity, they have always been concomitant with two other things — *fear* and *prayer*.

At some point of time all of us when faced with a test (including yours truly) have felt at the least a sliver of fear running through our bodies prior to a test and even most unbelieving of us have muttered a tiny little prayer under our breaths.

What a TEST has come to mean

For most Indians, given the supply-demand asymmetry, the word TEST has come to signify something larger than a set of questions, it has become

- a marker of where one stands in society or rather how one is evaluated (our Xth marks have the potential to become the first chip on our shoulder or the first albatross around our neck)
- a marker of how far one can go in life (if one gets into an IIT or an institution of great national repute, it is assumed that one would go very far in life)
- a door that opens opportunities that might otherwise remain closed forever

A TEST thus becomes something external to itself; the things that clearing a test can give us become more important than what a test actually is and thus from a very early age we carry a very distorted view of what it is.

Our fears and prayers were always centred around the same thing — the possible appearance or lack of it in the test of only what we learnt prior to it. I still remember crying into a plate of food after the Physics paper in my X board exam threw up questions worth more than 10 marks from exactly the one page that I omitted in my prep.

So, when as children we were asked how the test went, our reply would be — I did well it was very easy!

What a TEST really means

The word itself means an examination or being called to give an account of oneself when faced with certain problems that can be related to academics, that can be posed in any format or related to real-life itself.

So when we came back home happily after a paper and said the test was easy, the fact is that we were not tested!

Why the word TEST before the 5-day format of cricket? It signifies a test of skill and strength to perform over 5 days not over a few hours or even a day but over 5 days. Why the hesitation over granting TEST status to associate countries or weaker team? Apart from commercial considerations, the fact remains that it will be test only for the minnows and not for the established teams.

Why do we so eagerly await a clash between two great teams? We know that the players will have to play at their best, we know that their ability and their attitude will be tested to the fullest.

So before we go any further we need accept and embrace the fact the test is supposed to challenge you and one of the pre-requisites of triumphing in a challenge is to first enjoy or relish the prospect of a challenge.

One of the reasons that VK and MSD do so well in pressure situations is that they know that that is where the crux of a contest lies, the real test of competing is when you are in a pressure cooker situation, that the game has been building upto this point, the real stage is the biggest stage and all of the greatest players are measured against their ability to deliver on the biggest stage, be it the the World Cups or the Grand Slams.

So wanting an easy test is wanting to not be tested at all!

CAT will not be the last big test you will take

Given the inordinate amount of importance we place on tests, we tend of think of tests as phenomena that stand apart from life, as interludes that have an impact but are not really a part of life.

In reality though whether we like it or not we are going to be continuously tested. It will start right from the moment you enter into an IIM or any b-school with the summer placements. The placement interview will be a test, your summer project will be a test, your first job will be a test, bringing up children will be a test, managing your post-retirement life will be a test and dealing with your mortality will be a test.

Unfortunately, we see only some aspects of life as tests and not others, so we might actually fail miserably at them and might not even notice until is too late.

So CAT will not be the last test you will take and it might not be the toughest test of your life; your biggest hurdles still await you.

This does not mean that we have to live in fear but rather it means that we are constantly being summoned to give a good account of ourselves as individuals, we might succeed at some and fail at some but we need to be aware and view things in the right perspective at all times.

What is life without a TEST

I have always been guided by the light of the myths, be it Indian, Greek or Christian, there is a learning from them that can hold us in good stead.

All the great demons or anti-heroes from the myths be it a Ravana, a Medusa or the Minotaur are complete in themselves even before the arrival on the scene of the God or the hero — superhuman strength or powers accompanied by an evil act or an oppressed people. Even a contemporary demon like Hitler was complete in himself.

The hero though needs the demon, needs the anti-hero, needs the villain. The slaying of the demon is what makes a goddess, a goddess; a hero, a hero — Lord Rama, Perseus or Theseus. The center-piece of the story of their lives will always be the slaying of the demon.

Even America today takes on the role of the righteous savior waging the just war only because it played a crucial role in overthrowing Hitler; only because of Hitler it can go on creating newer evils with imaginary WMDs that need to be vanquished.

To use an example from contemporary sport — Roger Federer is maybe the greatest but what would his career have been had he not faced a Nadal or a Djokovic? Would his legacy have been the same if his career only showed slam victories over Malivai Washington, Lleyton Hewitt and an Andy Roddick at best? Would he even have the motivation to play for this long?

The demons we need to slay to become the heroes of our lives are not always outside of us, they can be the fears residing in our heads, the unique circumstances that each of our lives will throw up in front of us.

Those who succeed in life are those who are willing embrace the tests life that throws up.

It does not mean that fear and prayer need to banished. We will always have a bit of fear, the proverbial butterflies in the tummy but we should also know that it is natural, we should relish the uncertainty and should not let it overwhelm us.

One should pray but not for an easy test or for there to be no struggle but for the emotional fortitude to handle all the hurdles and challenges that we will encounter on the way knowing that they are inevitable and form the very warp and weft of life.

10 Things To Execute On CAT Day

Unlike international tests like the GMAT or the GRE, the CAT is not a standardized test, there can be – new question types, fluctuation in difficulty levels, more questions than expected from a particular area. Given this, it is imperative that you go into the test with a few pointers both to manage the uncertainty as well as to ensure that you optimise your performance during 180 minutes.

1. Be prepared for a fight, for a real TEST of your abilities

Do not go in expecting to have a good time. If it is a TEST, you will not have a good time. If it is an easy paper it means most people are killing it.

2. If it is tough for you it is tough for everyone else

A lot of students have asked me — how will I know whether others are finding it tough as well?

On test day your ability is not going to change dramatically. Neither are you going to solve questions that have always been out of your league and you are not going to miss straightforward questions.

So if you are looking at the questions and find that there are fewer questions than usual that you find solvable then it means that is a tough test. The usual solvable number changes from student to student. On Quant for one person it can be 25 for another it can be 20 and for yet another, it can 15.

If the test is tough, this number will come down for everyone. It goes without saying that the reverse occurs if the test is easy.

In both cases the task is the same, squeeze out every run you can from that pitch.

3. Remember, unfamiliar does not mean unsolvable!

How many times have you left a DI Set just because it is unfamiliar looking only to discover later that it was actually quite simple? I am sure quite often.

We are wired to be wary of the unfamiliar, it helps us survive. But on aptitude tests this can be your undoing. Very often DI Sets where the representation is not a regular one or LR sets which do not seem to be the standard arrangement types might not be difficult to solve once you invest 3-4 minutes trying to understand what they mean.

In fact, the converse is also true, familiar looking sets can lull you into investing time into solving them only to realize much later that they should have been left alone.

4. No Question Is Worth More Than 3 Minutes

Do not throw good money after bad money. Do not restart solving a question after you have already spent 4 minutes on it. You might think you can get 3 marks if you spend another 3 minutes but there are always plenty more fish in the sea, especially easier ones. Remember all those SimCAT questions you discovered you could easily solve only after you went home.

If I can't solve a Numbers question who will? **Do Not Let Your Favourite area or topic Jeopardise Your Test**

No question, not even ones from your favorite areas, are worth it.

5. Time-Limits Are Sacrosanct, Do Not Exceed Them

The most precious thing on an aptitude test is *time*. So if you have set some basic time-limits for yourself, VA-RC 20-40 or DI-LR 30-30 then you should stick to them. Even an extra 5 minutes here and there can jeopardise your sectional cut-offs and hamper your chances of getting a call.

For example, I would rather do two/three solvable LR Sets in 15-20 minutes and leave the seemingly tougher one after trying for 3-5 minutes rather than spend 35-40 mins trying to solve all the LRs. Always exit when your prescribed time-limit for an area is done. There might be easy DI sets waiting for you!

IIMs take sectional cut-offs very seriously, right down to the decimal. Remember it is a computer that will generate the list of candidates to be sent the first call based on the input parameters and not people sitting and evaluating your application qualitatively. So a 79.9 instead of 80 on a section will mean that you will not get the first call.

If you feel you need to give 10 minutes more to an area, do that later not immediately. We have discussed how you need to allocate your time in this post.

6. Skip questions within a set in DI and LR

Within a particular DI or LR set (more DI than LR), there will be one question which might end-up being time-consuming. This can be the first one or the second one. So first estimate the number of steps involved in solving a question or the precision of calculation required (close options), if both are high then quickly move on to the next question. In many cases, it does turn out that solving two questions of a set in 4 minutes is a much better option than getting stuck for 10-15 minutes with 3-4 questions.

7. The last 15 minutes of every section are most crucial

As the clock winds down on a section we start moving frantically from question to question. This period is usually the make or break period. We usually get greedy and frantically switch between questions hoping to make some quick marks!

How many questions can you realistically solve in 15 minutes if you have already solved the easy and medium questions? Not more than 5 questions.

So stop taking random shots at all unsolved questions.

VA-RC: If you have marked questions for later, go to those questions first and decide what to do. Once you are through with them, attempt other questions. If you have 2 RCs left, then realistically you can solve one properly. So choose that one and give it a good shot.

DI-LR: If there are eight sets of 4 questions each and you have solved 4 of them in the 45 minutes, you will have 4 of them left with 15 minutes to go.

Even if you want to pick out as many easy and medium questions from the remaining sets how many sets can you attempt?

Can you expect a set to yield itself to you without any brain-work? To quote a line from 3 Idiots, no set is going to say — *Tohfa Kabool Karo Jahanpana*

So if you had classified the sets as per their difficulty level, it is best to choose the two easiest sets to solve among the ones left and leave two sets instead of spending 5 minutes on each set.

QA: The MARK button is most important for this section. The last 15 minutes are going to be last 15 minutes of the test and hence a greater chance of becoming frantic.

If you had used the MARK button to single out questions that you feel you can do but will have taken time in the first round, your last 15 minutes will end up being productive. Almost everything that we discussed above applies most to this section.

Remember, in the slog overs, the batsmen who walk around the crease a lot just to scare the bowler are rarely successful. It is guys who keep their head still and execute who succeed.

8. Do not let your performance on one section jeopardize your performance on another section

Okay so one section, VA-RC or DI-LR did not go as per the plan. Does that mean you decide this test is over?

You are not the best judge of how well or how badly you have done. Let us say you performed below par in DI-LR and this means that from a potential 95 percentile you will come down to 90 percentile. This is possible only if you perform up to par in QA! If you take a negative mindset into QA, instead of a 90 you might end up with an 85 percentile! You know how bad that can be.

We have seen this too many times over the years.

I usually do not quote Sehwag as an example to be followed but in this case, you should follow the Sehwag model — he is least bothered about the previous ball, he always plays every ball afresh with a carefree attitude (carefree does not mean careless)

Do not let your performance in the previous section or question affect you, every ball is a new ball, every question is a new question, every section is a new section

9. Do not give up!

At no point in the test should you throw in the towel. Absolutely no way, if you are going to do that do not go to the test! Stay home instead and binge watch your favourite series.

Till the last second runs out, fight!

10. Take Only Your Brains To The Test, Leave Your Feelings Outside The Lab Along With Your Other Belongings

Your performance on aptitude tests is dependent on how well your brain processes the information in front of you. So if you let all the myriad things around the test — if I do not get it this time I can't imagine myself continuing in this job, if I do not get it this time my parents will get me married off and so on and so forth — affect your ability to process the information in the question, execute your timing strategies and will result in you not performing to the best of your abilities.

I know this might seem to be easier said than done but people truly have bigger problems — not knowing where their next meal is going to come from, not having money to pay their children's fees, being there with a loved one fighting cancer and worse — none of your problems are really bigger than these.

So do not let your emotions get the better of your abilities. So take only your mind to the test, leave your feelings along with your other belongings outside the lab.

So here is wishing all of my students, IMS students across the country and all the readers of this blog, all the very best for your CAT. Whatever the paper make sure like the cat, you land on your feet!

Go forth and maximize your score!