AlphaOmegaMath
Your Mathematics Specialist

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Examination Preparations 101

Feeling the jitters with examinations around the corner? Calm down and check out our survival tips!

Identify your learning style

According to researchers Frank Romanelli and his team[1], identifying your learning style can augment your learning efficiency and effectiveness. Such learning styles and profiles are often influenced by your environment, sensory modalities, personality types and cognitive styles.

Here is a quick summary of what the 4 common learning styles and profiles are. Check out some suggested tips to best cater to these learning styles and profiles for your maximum effectiveness!

1. Visual learners

Definition: A visual learner learns best by remembering things by sight. You may face challenges when instructions are given verbally. Colours, visual demonstration of the step by step processes and imageries like stories often help you better understand and retain information.

Tips

Ask for a demonstration of a similar question type from your teacher and tutor and take down the step-by-step processes involved. Simplify and take notes for your lesson handouts for personal customization. Purchase a set of coloured highlighters for colour coding key concepts/formulas/equations. You can also purchase the ultimate revision flashcards produced by AlphaOmegaMath for a quick visual recap for Mathematics! 😊 https://shopee.sg/The-Ultimate-Flash-Cards-Secondary-1-Mathematics-Volume-1A-i.233527102.12124467273

[1] Romanelli F, Bird E, Ryan M. Learning styles: a review of theory, application, and best practices. Am J Pharm Educ. 2009 Feb 19;73(1):9. doi: 10.5688/aj730109. PMID: 19513146; PMCID: PMC2690881.

2. Auditory learners

Definition: An auditory learner learns best through hearing and listening. Information and new concepts are best retained when verbally explained through. You may find yourself often repeating instructions and information aloud to help you retain it. You may often engage in conversation with yourself or others subconsciously to aid in your hearing and understanding.

Tips

Ask and keep asking questions! Stay inquisitive and volunteer actively to solve questions in class to help you better internalize. You can also consider listening to pre-recorded instructional videos online by your tutor for revision. Employ the use of mnemonics and read it aloud to aid you in recapping those important Mathematical formulas and steps.

3. Kinesthetic learners

Definition: A kinesthetic learner learns best through physical movements and 'hands-on' activities. You may find yourself having the frequent urge to move around or fiddle with an object (eg: pencil) to remain engaged. Lessons that require you to manipulate, construct something or communicate through touch are best retained.

Tips

Get your hands involved in problem solving! You can consider using everyday objects like sweets as manipulatives to learn and solve a Mathematical problem. Create diagrams, charts and mind-maps for important concepts and for problem-solving processes. You can also turn every Mathematical problem into a game! At AlphaOmegaMath, our tutors are armed with a selection of fun activities to make your revision both educational and enjoyable.

4. Learning through reading and writing

Definition: Such learners learn best through the written word and in reading aloud. You excel in note-taking and in digesting heavy-content resources.

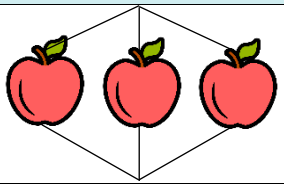
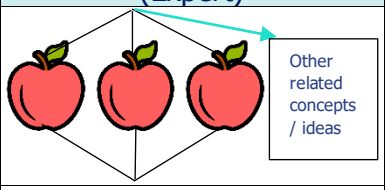
Tips

Learners under this profile can use real-world context or scenarios to further enhance your learning. For instance, reading up on real life statistics like the recent tax rebates, GST hikes helps you better understand how it affects your household expenses while also allowing you to better apply those Mathematical concepts/formulas in real life. You can also consider subscribing to MathFeed, a free online app to keep abreast of the latest news flash on Mathematics and the media. Volunteer to present your findings and explain your steps in solving that Mathematical problem to your class and tutor. Research has shown that the ability to explain concepts in writing reflects your ability to understand and apply them appropriately. Try these out and see Mathematics come alive!

Schedule for an early start

Start with the end in mind. Our brain takes time to process information and perform for higher-order thinking questions. Planning ahead to ensure enough preparation time is crucial.

Accroding to D C Saputra's research findings (2019)[2], he uses Biggs and Collin's (1982) SOLO taxonomy framework to assess students' current ability in mathematical problem-solving. Base on this framework, he concluded that our brain processing and ability to perform can be categorized into five level indicators (refer to the diagram below).

Pre-structural (Beginner)	Uni-structural	Multi-structural	Relational	Extended Abstract (Expert)
				
Example: What is an angle?	I am able to identify an angle property	I am able to use an angle property to find unknown angles	I am able to use and combine different angle properties to find unknown angles	I am able to find unknown angles by forming algebraic equations

Recent trends have shown that examination questions posed nowadays require students to peform and apply Mathematical concepts at relational and extended abstract levels. This is especially so for higher-order thinking questions. Such questions require students to identify the appropriate concepts and algorithms learnt, before applying it to reach the required solution. Students will also be required to link to other concepts and prior knowledge.

With the numerous cognitive processes involved in tackling higher-order thinking questions, it is wise to start preparation early!

[2] D C Saputra et al 2019 J. Phys.: Conf. Ser. 1320 012070

Celebrate humble beginnings!

Lastly, here are some final tips to fighting that 'procrastination syndrome' to get started.

1. **Know and manage your energy level.**
   Ponder and mentally chart your energy level for the week. Identify days where your energy level is higher and days when it is much lower. For days that you are less energetic, start with the simpler tasks and topics. For days that you are rearing to go, stretch yourself and take on more challenging topics!

2. **Reward yourself**
   Learning is an ongoing journey. The milestones along the journey are worth celebrating! Set small goals and reward yourself with that much anticipated leisure time and snack to keep your engine going. For instance, after completing an hour of revision, reward yourself and go for that much anticipated snack break or go outdoors and get some fresh air. Start small and keep going!

"Every child has the potential to grow and excel"

-AlphaOmegaMath 2022-

Editorial Team