黎 sir 教室 A Lai Learning Center
HKCEE / HKALE / HKDSE / IB Diploma /
GCE / IGCSE / GCSE / AP / MO / F.1 - F.7

HKCEE PHYSICS

2010 HKCEE Physics Paper II

Suggested Solutions

Prepared by Andy Lai

MC 係分 ABC Grade 既地方,

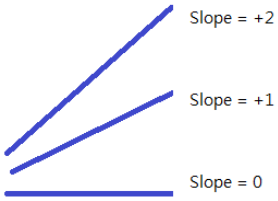
越出越煩, 越出越深,

同學一定要快又要好小心!

Enrollment Hotline: 6772 3001 Website: www.andylai.hk MSN: mrandylai@hotmail.com
Address: Rm706, Prosper Commercial Building, 9 Yin Chong Street, Mong Kok, Kowloon, Hong Kong.

2010 HKCEE Physics Paper II Suggested Answers

1.	**C**	**2.**	**D**	**3.**	**C**	**4.**	**B**	**5.**	**B**
6.	**B**	**7.**	**A**	**8.**	**B**	**9.**	**A**	**10.**	**A**
11.	**C**	**12.**	**C**	**13.**	**B**	**14.**	**C**	**15.**	**D**
16.	**D**	**17.**	**D**	**18.**	**C**	**19.**	**B**	**20.**	**D**
21.	**C**	**22.**	**D**	**23.**	**B**	**24.**	**C**	**25.**	**A**
26.	**B**	**27.**	**D**	**28.**	**A**	**29.**	**B**	**30.**	**D**
31.	**B**	**32.**	**B**	**33.**	**A**	**34.**	**C**	**35.**	**A**
36.	**A**	**37.**	**C**	**38.**	**A**	**39.**	**B**	**40.**	**A**
41.	**D**	**42.**	**D**	**43.**	**C**	**44.**	**A**	**45.**	**D**

Section A		
1.	C	黎 Sir 提提你 : 1. **Given the distance XY = YZ = ZX, therefore,** $\uparrow Time \Rightarrow \downarrow Speed$ **!** 2. **Given s-t graph, slope = speed, therefore,** $\uparrow Slope \Rightarrow \uparrow Speed$ **.** 3. **Let XY = YZ = ZX = 20 m,** $V_{xy} = 2\ m\ s^{-1}$, $V_{YZ} = 1\ m\ s^{-1}$, $V_{ZX} = 2\ m\ s^{-1}$, 

2.	**D**	**黎 Sir 提提你 :** **Background knowledge:** **1. Given v-t graph, slope = acceleration,** **2. By Newton's 2nd Law,** $F_{net} = ma$, $\uparrow F_{net} \Rightarrow \uparrow a \Rightarrow \uparrow Slope$. **Situation 1:** **3. Before** t_1, $F_{net} = F - f$ **, F: Constant horizontal force, f: friction.** **4. After** t_1, $F_{net} = -f$ **,** **Situation 2:** **5. Therefore, Before** t_1**, Stronger constant horizontal force** $\Rightarrow \uparrow F_{net} \Rightarrow \uparrow a \Rightarrow \uparrow Slope$. **6. After** t_1**, friction remains unchanged** $\Rightarrow$ **Same** F_{net} $\Rightarrow$ **Same a** $\Rightarrow$ **Same slope**

3.	**C**	**黎 Sir 提提你 :** **1. Treat the hook, spring balance, light string (i.e. everything) as a whole body.** **2. Newton's 1st Law,** $F_{net} = F - T = 0N \Rightarrow$ **remains at rest!** **3. Therefore, Magnitude of tension in the string = 5 N.** **Remarks: Treat everything as a whole system is a standard skills in Mechanics!**

4. **B**

黎 Sir 提提你 :

1. **The Reading of the Scale ≠ Weight of the Body.**
2. **The Reading of the Scale = Force acting on the scale / lift by the Bear**
3. **W = Gravitational force acting on the Bear by the Earth (Weight of the bear)**
4. **R1 = Force acting on the Bear by the scale / lift (Normal Reaction)**
5. **R2 = Force acting on the scale / lift by the Bear / lift (Reaction Force of R1)**
6. **R1 = R2 (Action-and-Reaction Pair!)**

Lift is accelerating upwards (from G/F to 2/F)

⇒ Bear is accelerating upwards

⇒ Net Force acting on the Bear = R1 - W

⇒ F = ma (Newton's 2nd Law)

⇒ R1 – W = ma

⇒ R1 = W + ma > W

⇒ He feels he is heavier! (i.e. R1 / R2 increases)

⇒ No change in actual weight (i.e. Same W)

5.	**B**	**黎 Sir 提提你 :** **1. Area of F-s graph = Work done by F.** **2. From s = 2 m to s = 5 m, Work done by F =** $8\times(5-2)=24$ **J** **Remarks: Simply think about** $Slope=\frac{y}{x}$ **and** $Area=x\times y$ **is a standard skills in dealing with the physical meaning of a graph in physics.**

6.	**B**	**黎 Sir 提提你 :** **By** $a=\frac{v-u}{t}$, $a=\frac{0-16}{4.5-1.2}=-4.85\ m\ s^{-2}$ **Remarks: Definition of acceleration!**

7.	**A**	**黎 Sir 提提你 :** **1. K.E. =** $\frac{1}{2}mv^2$**, from t = 1s to 1.2 s, v = constant** $\Rightarrow$ **K.E. = constant.** **2. After t = 1,2 s, By** $v^2=u^2+2as$**, Compare** $y=mx+c$ $\Rightarrow$ $y=v^2$ **while** $x=s$, $c=u^2=0$, $m=2a$ **3. Therefore, it is a download sloping** $(\because a=-ve)$ **straight line** $(\because y=mc+c)$. **Remarks: Same type of graphical questions in 2009 MC 6, 2008 MC 8.**

8.	**B**	**黎 Sir 提提你 :** **1. Heat Capacity $\Rightarrow$ Energy needed to increase $1^{\circ}C$ of the WHOLE substance. i.e. $E = C(\Delta T)$** **2. Given Same Power $\Rightarrow$ $\downarrow E = \downarrow C(\Delta T) = \downarrow t \Rightarrow$ Faster reach boiling point $\Rightarrow$ Boiling first!** **3. P: $300 \times (218 - 20) = 59400$ J** **4. Q: $500 \times (132 - 20) = 56000$ J** **5. R: $500 \times (84 - 20) = 57600$ J** **Remarks: Don't make confuse with Heat Capacity and Specific Heat capacity!**

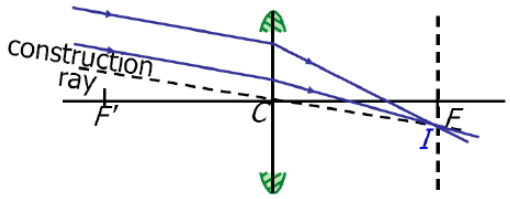
9.	**A**	**黎 Sir 提提你 :** **(1) True** **Water can transfer heat away from the paper tray very quickly (By convection current), therefore, the paper does not catch fire.** **(2) True** **During changing state, Energy (i.e. latent heat) is absorbed for increasing the potential energy of molecules to overcome the attractive forces between them. Therefore they can move further apart from each other and become gaseous state.** **(3) False** **There is heat transfer between the paper tray and the flame (mainly by convention and radiation)**

10.	**A**	**黎 Sir 提提你 :** **(1) True** **Water on the skin evaporates by absorbing the latent heat of vaporization from our skin, then our skin temperature is lower and we feel cooler.** **(2) False** **Water on the skin only absorbs latent heat of vaporization, not fusion.** **(3) False** **Water on the skin only absorbs latent heat of vaporization, not release.**

11.	**C**	**黎 Sir 提提你 :** **1. By** $Pt = ml$, $P = (0.5 - 0.45)(2.26 \times 10^6)/(7 - 2) = 377$ **W** **Remarks: refer to 2004 MC 9, 2003 MC 21**

12.	**C**	**黎 Sir 提提你 :** **1. The first sound is directly go to her ear, the second sound is the one reflected by the building then go to her ear.** **2. By Speed = Distance / Time,** $t_1 - t_2 = 90/340 - (80+80+90)/340 = 0.47s$

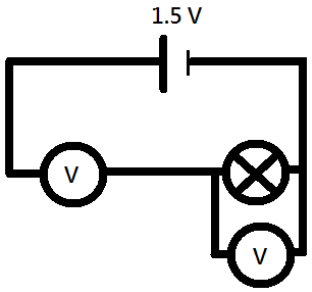
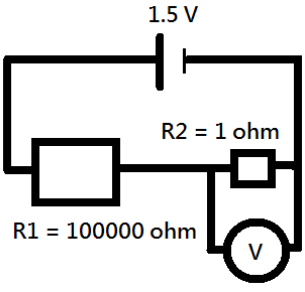
13.	**B**	**黎 Sir 提提你 :** **1. By** $n = \frac{\sin i_{air}}{\sin r}$**, the value of** $\frac{\sin i}{\sin r}$ **should stays nearly constant.** **2. But Data Q,** $\frac{\sin i}{\sin r} = 1.71$ **while others are only 1.4x.**

14.	**C**	**黎 Sir 提提你 :** **By the ray diagram below:** **Construction Line: Parallel Light ray ⇒ Image formed on Focal Plane!!!**  **Remarks: Refer to Andy Lai's mock exam paper** **(2009 HKCEE Physics Mock Exam Paper 2 - Set 2 MC 30)**

15.	**D**	**黎 Sir 提提你 :** **1. Sound waves are longitudinal wave.** **2. All waves have diffraction and (interference).** **3. Sound wave is mechanical waves, which requires medium to transfer.** **4. Audible range of frequency for human = 20 Hz to 20000 Hz only**

16.	**D**	**黎 Sir 提提你 :** **(1) False** **By** $P = VI$, $1150 = 220I$, $I = 5.22\,\text{A}$ **(2) True** **Power Efficiency = 750 / 1150 = 65%** **(3) True** **By** $v = f\lambda$, $3\times10^8 = 2450\times10^6\lambda$, $\lambda = 0.12\,\text{m}$ **Remarks: Some students think that efficiency is out-of-syllabus, but HKEAA can ask you about this concept in another point of view!**

17.	**D**	**黎 Sir 提提你 :** **Both switches are in-series,** **⇒ Both car doors closed** **⇒ the light bulb is Short-circuited** **⇒ No current flow through the light bulb** **⇒ The light bulb does not light up.**

18.	**C**	**黎 Sir 提提你 :** **Switch open, the circuit will be as follows:**  **You can think about in this way⇒ ⇒ ⇒ ⇒ ⇒**  **Therefore, Almost all 1.5 V drop across R1 (i.e.** V_P**) and nearly 0 V drop across R2 (i.e.** V_Q**)**

19.	**B**	**黎 Sir 提提你 :** **1. Resistance of the light bulb,** $R = \frac{V^2}{P} \Rightarrow R = \frac{6^2}{12} = 3\Omega$ **.** **2. By Potential divider,** $6 = 9 \times \frac{3}{3 + R // R} \Rightarrow$ **R // R = 1.5** Ω **3. R // R = 1.5** $\Omega \Rightarrow$ **R must be 3** Ω

20.	**D**	**黎 Sir 提提你 :** **P touches the case** $\Rightarrow$ **Live wire is always +220 V / -220 V bur Earth wire is always 0V** $\Rightarrow$ **The resistance of Earth wire is much more smaller than that of heating element** $\Rightarrow$ **A current will not flow through the heating element (i.e. A is false)** $\Rightarrow$ **The heating element will not burn out (i.e. C is false)** $\Rightarrow$ **The fuse will not blow since no current flow through the neutral wire (B is false)** $\Rightarrow$ **A current will always flow through the live wire to the Earth wire even when S is open. (i.e. D is true)**

21.	**C**	**黎 Sir 提提你 :** **Let all the resistance of resistor X, Y and Z = 2 Ω .** **(1) False** **Y // Z ⇒ 1 Ω , potential divider,** $V_{PQ} = 12 \times \frac{1}{2+1} = 4V$ **(2) True** **No resistance across wire QS ⇒ No voltage drops across QS ⇒** $V_{QS} = 0$ **V** **(3) True** **Y burns out ⇒** $R_{RS} = R_Z = 2\Omega$ **⇒** $V_{RS} = 12 \times \frac{2}{2+2} = 6$ **V**

22.	**D**	**黎 Sir 提提你 :** **(1) False** **By Fleming's left hand rule, the current direction is wrong is Pole X is North and Pole Z is South** **(2) True** **Supported by Fleming's left hand rule** **(3) True** **Supported by Fleming's left hand rule**

23.	**B**	**黎 Sir 提提你 :** **1.** $960 \div 2 = 480 \Rightarrow 480 \div 2 = 240 \Rightarrow$ **2 half-lives = 2 mins** $\Rightarrow$ **1 half life = 1 min** **2.** $240 \div 2 = 120 \Rightarrow 120 \div 2 = 60 \Rightarrow 60 \div 2 = 30 \Rightarrow$ **3 more half lives** **3. 3 more half lives $\Rightarrow$ 3 more minutes!** **Remarks: although you think my method is stupid, but I can get the answer easily! Please don't always think about the formula:** $N = N_\circ(\frac{1}{2})^n$ **! To me, I would rather use** $N = N_\circ \div 2 \div 2 \div 2....$ **to count the no. of half lives! Stupid but Simple!**

24.	**C**	**黎 Sir 提提你 :** **1.** α **particles will ionize the air molecules $\Rightarrow$ Ions pairs formed!** **2. Positive ions in air neutralize the negatively charged ball Q while negative ions in air neutralize the positively charged ball P $\Rightarrow$ Both ball P and Q become neutral after a period of time.** **3. Therefore, the will remains at rest vertically and no longer rebounds each other. ie. W = T.**

25.	**A**	**黎 Sir 提提你 :** **1. α decay $\Rightarrow$ $\downarrow$ mass no. = 4 and $\downarrow$ atomic no. = 2** **2. β decay $\Rightarrow$ $\downarrow$ mass no. = 0 and $\uparrow$ atomic no. = 1** **3. γ decay $\Rightarrow$ no change in both mass and atomic no.** **4. After 1 x α decay and 1 x β decay, $\downarrow$ mass no. = 4 and $\downarrow$ atomic no. = 1**

26.	**B**	**黎 Sir 提提你 :** **The first statement is true.** **Image formed by plane mirror is virtual because it cannot be formed on a screen.** **The second statement is true.** **The magnification = 1.** **But second statement is not the explanation of first statement.**

27.	**D**	**黎 Sir 提提你 :** **1. Nuclear fusion: $^2_1H+^3_1H\rightarrow^4_2He+^1_0n$, the neutrons is released but is not used in nuclear fusion to sustain a chain reaction.** **2. Nuclear fusion can release a large amount of energy (Imagine the sun surface is very hot!)** **Remarks: Don't make confuse with nuclear fission and nuclear fusion.**

The end of Section A

Section B		
28.	**A**	**黎 Sir 提提你 :** **Before S1 broken,** $F_{net} = 0\,\text{N} \Rightarrow 100 = 30 + f \Rightarrow f = 70\,\text{N}$ **(to the right)** **After S1 broken,** $T_{S_2} = 30\,\text{N} \Rightarrow f = 30\,\text{N}$ **(to the left)** $\Rightarrow F_{net} = 0\,\text{N}$ **Remarks: Friction tends to oppose motion, is passive and has maximum value.**

29.	**B**	**黎 Sir 提提你 :** **By Law of conservation of energy,** **1.** $\downarrow K.E. = \uparrow P.E. \Rightarrow \frac{1}{2}mv^2 = mgh \Rightarrow \frac{1}{2}mv^2 = mg(s)(\sin\theta)$ **2. Therefore,** $24 = 5(10)(2.4)\sin\theta \Rightarrow \theta = 11.5^\circ$

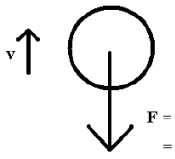
30. **D**

黎 Sir 提提你 :

(1) True

As the beginning, its velocity is upwards and maximum, so the air resistance is downwards and maximum.

Therefore, the resultant force acting on the pen is $F = W + f_{air}$, By Newton's 2nd Law,



$$F = ma$$
$$ma = W + f_{air}$$
$$a = \frac{mg + f_{air}}{m}$$
$$a = g + \frac{f_{air}}{m}$$

Therefore, at the beginning, the acceleration is slightly larger than g.

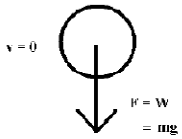
(2) True

As the pen rises, due to the weight and air resistance, the pen will experience a downward resultant force and decelerates.

The air resistance acting on the pen decreases with the velocity of the pen, so the deceleration of the pen will decrease.

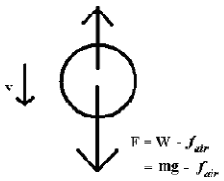
When the velocity of the pen decreases to zero, the air resistance acting on it will be zero. The accceleration of the pen is g only.

This is the highest position of the pen.



(3) True

As the pen is falling down from its highest position, the air resistance will act on it upwards to oppose the motion. by Newton's 2nd Law of motion,



$$F = ma$$
$$ma = W - f_{air}$$
$$a = \frac{mg - f_{air}}{m}$$
$$a = g - \frac{f_{air}}{m}$$

Therefore, the pen will accelerate downwards with acceleration less than g.

The acceleration of the pen will decreases as the air resistance will increases with the velocity.

When the air resistance increases and equals the weight of the pen, the pen will no longer accelerate and it will keep moving down will constant velocity.

This is so-called Terminal Velocity.

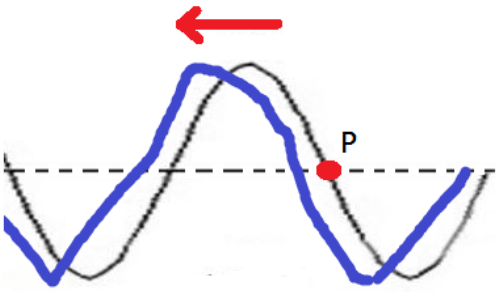
Remarks: The difficulty is A-Level, but the concept is CE-Level. I already reminded nowadays CE-Level have a few questions like this. For more details, please refer to my blog:

http://hk.myblog.yahoo.com/jw!M9bM3FKeER6.rn.AjGqknb0-/article?mid=39

31.	**B**	**黎 Sir 提提你 :** **By considering horizontal and vertical motion independently,** $\begin{cases} T\sin\theta = ma \\ T\cos\theta = mg \end{cases} \Rightarrow \tan\theta = \frac{a}{g} \Rightarrow a = g\tan\theta \Rightarrow a = 10\tan 10^\circ$ **= 1.76** $m\ s^{-1}$

32.	**B**	**黎 Sir 提提你 :** **By Law of conservation of momentum, Total momentum is conserved.** **Before collision, Total momentum =** $2\times 6+1\times(-4)=+8\ kg\ m\ s^{-1}$ **(1) False** **After collision, Total momentum =** $2\times(-3)+1\times(2)=-4\ kg\ m\ s^{-1} \neq +8$ **(2) False** **After collision, Total momentum =** $2\times(2)+1\times(12)=+16\ kg\ m\ s^{-1} \neq +8$ **(3) True** **After collision, Total momentum =** $2\times(1)+1\times(-6)=-4\ kg\ m\ s^{-1}$

33.	**A**	**黎 Sir 提提你 :** **(1) True** **Same Power ⇒ ↓ Time of rising same temperature range ⇒ ↓ Heat capacity** **(2) True** **Heat capacity = Mass x Specific heat capacity** **Heat capacity of X > Heat capacity of Y** **⇒ mass of X > mass of Y (Given same materials)** **(3) False** **Since we don't know the mass of X and Y, therefore, we cannot know which specific heat capacity is smaller.**

34.	**C**	**黎 Sir 提提你 :** **Black line: t = 1s** **Blue line: next moment** **⇒ P will go down from equilibrium position after t = 1s**  **Remarks: It's a trick question since now t = 1 s, not 0 s.**

35.	**A**	**黎 Sir 提提你 :** **1. At t = t_1, Particle E, I and M are in equilibrium, Particle G and K are at amplitude since their displacement are greatest! ⇒ Momentarily at rest!**

36.	**A**	**黎 Sir 提提你 :** **(1) True** **At the position of particle A** **⇒ Crest meet Trough** **⇒ Destructive interference** **⇒ Always at rest** **(2) False** **Water particle at B is not always at crest since the wave is travelling.** **(3) False** **Trough + Trough at position C ⇒ Constructive interference!**

37. **C**

黎 Sir 提提你 :

1. **Speed of the car = Distance / Time**

2. **Distance travel during 0.2s**

   = $3\times10^{8}\times\frac{3.6\times10^{-7}}{2}-3\times10^{8}\times\frac{3.1\times10^{-7}}{2}=54-46.5=7.5\,\mathbf{m}$

3. **Estimated Speed of the car =** $\frac{7.5}{0.2}=37.5\ m\ s^{-1}$

Remarks: we assume that the speed of light is much faster than the speed of the car! ⇒ Difficult question!

38. **A**

黎 Sir 提提你 :

By $n_1\sin\theta=n_2\sin\theta$, $n_1\sin50^\circ=\sin90^\circ$, $n_1=\frac{\sin90^\circ}{\sin50^\circ}=\mathbf{1.3054}$

By $(1)\sin(90^\circ-\theta)=1.3054\times\sin40^{\theta}$ ⇒ $\theta=33^\circ$

39. **B**

黎 Sir 提提你 :

(1) False

By $v=f\lambda$, $V_{air}>V_{water}$, ⇒ $\lambda_{air}>\lambda_{water}$

(2) True

Frequency of a wave depends on the source only!

(3) False

By $n_1\sin\theta=n_2\sin\theta$ ⇒ $\uparrow n\Rightarrow\downarrow\sin\theta$ ⇒ $\downarrow\theta$ ⇒ **Bend towards normal**

.

40.	**A**	**黎 Sir 提提你 :** **(1) True** **Along PQ, normally constructive interference occur. But in practice, the sound energy is lost to surrounding as it travels.** **(2) False** **Both source are in-phase ⇒ Constructive interference occur along the middle line OPQ.** **(3) False** **It does not show the difference in loudness in different position!**

41.	**D**	**黎 Sir 提提你 :** **1. ↑ Equivalent Resistance ⇒ ↓ Current through the ammeter** **2. Equivalent Resistance of parallel branch must be less than the resistance of smallest branch!** **3. By trial and error, Equivalent resistance between S and P is the largest**

42.	**D**	**黎 Sir 提提你 :** **1. By right hand grip rule ⇒ South pole on top of solenoid while North pole at the bottom of solenoid** **2. As the ring is falling down towards X, By lenz's law, there is an induced current in a direction to oppose the change in magnetic field through it i.e. South at the bottom of the ring while North on top of the ring ⇒ induced current flow anti-clockwise in the point of view of observer's eye** **3. As the ring is falling down towards Y, the ring is inside the solenoid, therefore, no change in magnetic field through the ring ⇒ No induced current at all.** **Remarks: Lenz' Law is a hot topic in every year examination!**

43.	**C**	**黎 Sir 提提你 :** **1. Soft iron is used since soft iron can be easier magnetized and demagnetized!** **2. Largest voltmeter reading ⇒ Step up transformer ⇒** $N_1 < N_2$

44.	**A**	**黎 Sir 提提你 :** **1. By P = VI ⇒** $P_p = (220)(5) = 1100W$ **⇒** $P_s = 1100 \times 90\% = 990W$ **!** **2. Total numbers of bulbs =** $990/40 = 24.75$**! ⇒** Max. No. $= 24$**!**

45.	**D**	**黎 Sir 提提你 :** **1. Electric Force = Magnetic Force ⇒ Go Straight!** **2. Magnetic Force (Downward, by Fleming's left hand rule)** **3. Therefore, Electric Force is Upward (Positive on the top!)** **4. The direction of electric field = from positive to negative.**

The end of Section B.

MC 係分 ABC Grade 既地方,

越出越煩, 越出越難!

轉數快, 概念清! 缺一不可!

同學一定要快又要好小心!

Andy's predicted M.C. Grade boundaries:

A: 39 / 45 B: 36 / 45 C: 31 / 45

D: 25 / 45 C: 20 / 45

The End.

黎 Sir 教室 A Lai Learning Center

HKCEE / HKALE / HKDSE / F.1 - F.7 / MO

AP / SAT / IB / GCSE / IGCSE / GCE / HSC

資深中學補習導師 小組補習 事半功倍!!!

黎 sir 簡介

- ✧ 畢業於香港中文大學，黎 sir 教室創辦人之一.
- ✧ 多年教授會考 / 高考 / 中學文憑 / IB Diploma / SAT / AP / GCSE / IGCSE / GCE/ HSC 課程經驗，信心保證.
- ✧ 現於黎 sir 教室及中學任教補習班，學生就讀於英文中學，中文中學，國際學校及英國留學生.
- ✧ 熟悉近年出題趨勢，教授考試取分技巧；鼓勵同學獨立思考，增強同學理解能力
- ✧ 善用生活化例子講解，教法生動，增加學習趣味；深入淺出，明白學生學習上的困難和需要.
- ✧ 中英對照筆記，適合中文和英文中學學生就讀；精心編制練習和試題，協助同學盡快掌握答題技巧.
- ✧ 黎 sir 在中學和大學時代已是一名傑出學生，曾獲取多項學業上和運動上的獎學金及獎項；
  曾代表香港參加國際性運動比賽，取得優異成績，「又讀得又玩得」，絕不是死讀書的書呆子.
- ✧ 黎 sir 在就讀大學時曾於全球最大美資電腦公司任實習生超過一年，大學畢業後旋即於全港最大英資電腦公司，
  負責主理該公司所代理的全球最大美資電腦公司儲存系統銷售業務(當時黎 sir 只得 24 歲).
- ✧ 於短短半年內將該產品線銷售業績提升超過 50%. 同時更被公司評選為"傑出表現員工 Outstanding Performer”，
  成功將書本上的知識靈活運用於工作上.
- ✧ 黎 sir 為了教學理想，毅然辭去工作，全身投入教學事業，希望將自己的一套獨特的學習方法教授學生
- ✧ 黎 sir 學生於 2009 年公開考試成績優異，包括:
- ✧ 兩位學生成功拔尖，入讀港大科學系和中大法律系;
- ✧ 國際預科文憑 (IB Diploma) 經濟科獲取最高等級 (7 級) 成績;
- ✧ 多位學生於英國普通教育文憑(GCE)及英國普通中學教育文憑(GCSE)獲取 A/A*成績;
- ✧ 2009 年度 8 位學生參加香港中學會考, 6 位取得 20 分以上佳績，並且所有科目皆取得 ABC 等等級，其中 1 位文
  科生更獲取 26 分佳績，整體 ABC 率達 78%，整體合格率達 100%. 名符其實是小班教學，事半功倍.

課程特色

- ✧ 小組教學(1 – 6 人)，導師親身教學；照顧每位學生需要，事半功倍.
- ✧ 精心編制筆記，練習以近 20 年本地和外國公開試題為藍本.
- ✧ 概念理解，取分技巧並重；協助同學盡快掌握答題技巧.
- ✧ 歡迎自由組合小組上課，時間及課程內容編排更有彈性.
- ✧ 時間及課程請瀏覽以下網址: www.andylai.hk

上課地址: 香港九龍旺角煙廠街 9 號興發商業大廈 706 室

地鐵: 旺角 E2 出口，油麻地 A2 出口

小巴: 21K, 74, 74S

黎Sir教室 A Lai Learning Center

報名熱線: 6772 3001

電郵: enquiry@andylai.hk

網址: www.andylai.hk