黎 sir 教室 A Lai Learning Center
HKDSE / IB Diploma / GCE AS AL / AP / SAT / HSC
IGCSE / GCSE / IB MYP / KS3 / MO / F.1 - F.6 / Y9 - Y13

2017 HKDSE Mathematics Core Paper 2 Suggested Solutions

Prepared by Andy Lai

HKDSE 5** Mathematics Teacher

(100% M.C. Right!)

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!

We deliver quality education.

We teach with hearts!

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.

2017 HKDSE Mathematics Paper 2 Suggested Answers

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

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:
5: 43 / 45 5*: 40 / 45 5: 38 / 45**
4: 34 / 46 3: 30 / 45 2: 26 / 45

Section A

1. **A**

黎 Sir 提提你 :

- $3m^2-5mn+2n^2+m-n=(3m-2n)(m-n)+(m-n)=(m+n)(3m-2n+1)$

2. **D**

黎 Sir 提提你 :

- $\left(\frac{1}{9^{555}}\right)3^{444}=\frac{3^{444}}{\left(3^2\right)^{555}}=\frac{3^{444}}{3^{1110}}=3^{444-1110}=3^{-666}=\frac{1}{3^{666}}$

3. **A**

黎 Sir 提提你 :

- $\frac{a+4b}{2a}=2+\frac{b}{a} \Rightarrow \frac{a+4b}{2a}=\frac{2a+b}{a} \Rightarrow \frac{a+4b}{2}=\frac{2a+b}{1} \Rightarrow a+4b=4a+2b$
- $3a=2b$
- $a=\frac{2b}{3}$

4. **D**

黎 Sir 提提你 :

- $\frac{1}{\pi^4}\approx 0.010265982...=0.0103$ **(3 sig. fig.)**
- $\frac{1}{\pi^4}\approx 0.010265982...=0.01027$ **(3 sig. fig.)**
- $\frac{1}{\pi^4}\approx 0.010265982...=0.01027$ **(5 decimal places)**
- $\frac{1}{\pi^4}\approx 0.010265982...=0.010266$ **(6 decimal places)**

5.	**D**	**黎 Sir 提提你 :** ● **6 – x < 2x -3 or 7 – 3x > 1** ⇒ **3x > 9 or 3x < 6** ⇒ **x > 9/3 or x < 2** ⇒ **x > 3 or x < 2**

6.	**A**	**黎 Sir 提提你 :** ● $f(x)=x^2-5x+k$ ● $f(2)-f(-2)=(2)^2-5(2)+k-[(-2)^2-5(-2)+k]=4-10+k-4-10-k=-20$

7.	**B**	**黎 Sir 提提你 :** ● $p(x)=2x^2-11x+c$ ● $p(x)$ **is divisible by x – 7** ⇒ $p(7)=0$ ⇒ $2(7)^2-11(7)+c=0$ ⇒ $c=-21$ ● $p(x)$ **is divided by 2x + 1** ⇒ $p(-1/2)=2(-1/2)^2-11(-1/2)-21=-15$

8.	**A**	**黎 Sir 提提你 :** ● $4x^2+m(x+1)+28\equiv mx(x+3)+n(x+4)$ ● $4x^2+mx+(m+28)\equiv mx^2+(3m+n)x+4n$ ● **Compare coefficients and constant:** $\begin{cases}4=m\\ m=3m+n\\ m+28=4n\end{cases}\Rightarrow\begin{cases}m=4\\ n=2(-4)=-8\end{cases}$

9.	**C**	**黎 Sir 提提你 :** ● $y=(px+5)^2+q \Rightarrow$ **Co-ordinates of Vertex = (-5/p, q)** ● **x-coordinate of vertex < 0 $\Rightarrow$ -5/p < 0 $\Rightarrow$ p > 0** ● **y-coordinate of vertex < 0 $\Rightarrow$ q < 0**

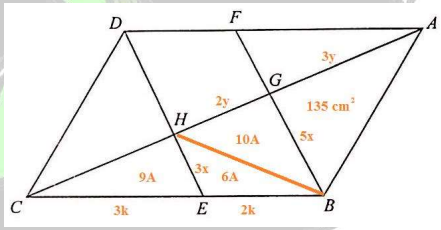
10.	**C**	**黎 Sir 提提你 :** ● $(2000)(1+0.05/2)^4-2000\approx \$437$

11.	**B**	**黎 Sir 提提你 :** ● $\left(\frac{1}{20000}\right)^2=\left(\frac{4}{A}\right) \Rightarrow \frac{1}{20000^2}=\frac{4}{A} \Rightarrow A=1.6\times10^9 \quad cm^2$ ● $A=\frac{1.6\times10^9}{100\times100} \quad m^2 \Rightarrow A=1.6\times10^5 \quad m^2$

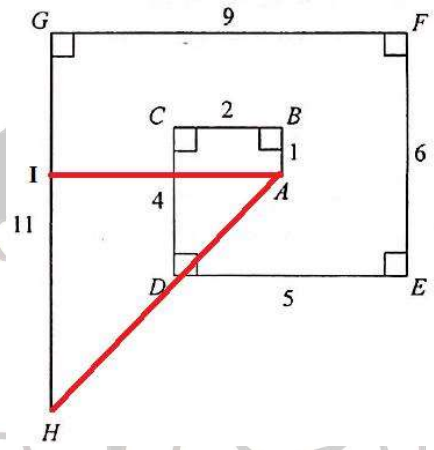
12.	**C**	**黎 Sir 提提你 :** ● $y=k_1+k_2x^2 \Rightarrow \begin{cases}7=k_1+k_2(1)^2\\13=k_1+k_2(2)^2\end{cases} \Rightarrow \begin{cases}7=k_1+k_2\\13=k_1+4k_2\end{cases} \Rightarrow \begin{cases}k_1=5\\k_2=2\end{cases}$ ● $y=(2)+(5)x^2 \Rightarrow y=(2)+(5)(3)^2=47$

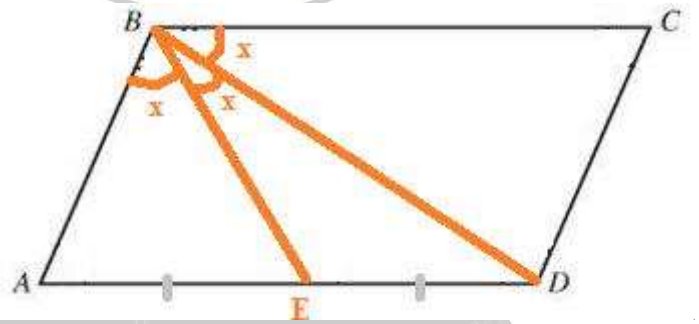
13.	B	黎 Sir 提提你 : ● 1^{st} Term = 1, ● 2^{nd} Term = 1 + 2(1) + 2 = 1 + 4 = 5 $\Leftarrow$ (1 + 4) ● 3^{rd} Term = 5 + 2(2) + 2 = 11 $\Leftarrow$ (5 + 6) ● 4^{th} Term = 11 + 8 = 19 $\Leftarrow$ (11 + 8) ● 5^{th} Term = 19 + 10 = 29 $\Leftarrow$ (19 + 10) ● 6^{th} Term = 29 + 12 = 41 $\Leftarrow$ (29 + 12) ● 7^{th} Term = 41 + 14 = 55 $\Leftarrow$ (41 + 14)

14.	B	黎 Sir 提提你 : ● Let the area of ΔADB be A and area of ΔBDC be A – 24 respectively. ● Area of ΔABC = (AC)(BD)/2 = 84 cm^2 $\Rightarrow$ A + A – 24 = 84 $\Rightarrow$ A = 54 cm^2 ● In ΔABD, AD x 12 / 2 = 54 cm^2 $\Rightarrow$ AD = 9 cm ● In ΔBDC, CD = 14 - 9 = 5 cm ● In ΔBDC, $5^2 + 12^2 = BC^2$ $\Rightarrow$ BC = 13 cm ● In ΔABD, $9^2 + 12^2 = AB^2$ $\Rightarrow$ AB = 15 cm ● Perimeter of ΔABC = 15 + 13 + 14 = 42 cm

15.	**C**	**黎 Sir 提提你 :** ● $36\pi = \frac{1}{3}\pi(2r)^2 h \Rightarrow r^2 h = 27$ ● $\pi r^2 (3h) = (27\pi)(3) = 81\pi\ cm^2$
16.	**D**	**黎 Sir 提提你 :** ● **By similar figures,** $\frac{Area\ \Delta CEH}{Area\ \Delta CGB} = \left(\frac{3}{5}\right)^2 = \frac{9}{25}$ ● **Let Area of ΔCHB = 9A and Area of ΔCGB = 25A** ● **Given same height, Base ratio = Area ratio,** $\frac{Area\ \Delta CEH}{Area\ \Delta BEH} = \frac{3}{2} = \frac{9}{6}$ ● **Let Area of ΔCEH = 9A and Area of ΔBEH = 6A** ● **Therefore, Area of ΔHGB = 16 – 6 = 10A** ● **Given same height, Base ratio = Area ratio,** $\frac{Area\ \Delta HBG}{Area\ \Delta ABG} = \frac{2}{3} = \frac{10A}{135}$ ● **Therefore, A = 9 $\Rightarrow$ Area of the quadrilateral DFGH = 16(9) = 144 cm^2** ● **By symmetry, Area of quadrilateral DFGH = 144 cm^2**  ● **Remarks: this type of question appears in HKCEE and HKDSE Mathematics M.C. paper nearly every year, However, only two standard skills you learnt in lower form: Similar figures, Area ratio = square of length ratio and same height, Area ratio = base ratio can solve it easily !!!)**

17.	D	黎 Sir 提提你 : ● In Δ ADC, $\frac{\sqrt{208}}{\sin 60^\circ} = \frac{4}{\sin \angle ACD} \Rightarrow \angle ACD = 13.89788625...$ ● In Δ DCE, $\angle DCE = 60 - 13.89788625 = 46.10211375...$ ● In Δ DCE, $\angle CED = 180 - 60 - 46.10211375... = 73.89788625$ ● In Δ DCE, $\frac{\sqrt{208}}{\sin 73.89788625^\circ} = \frac{CE}{\sin \angle 60^o} \Rightarrow CE = 13\ cm$
18.	A	黎 Sir 提提你 : ● Let $\angle$ ABC be x ● $\angle$ CDA = 180 – 124 = 56^o (Opp. $\angle$, // gram) ● In ΔADC, $\angle$ ACD = 56^o (Base sides of isos. Δ) ● $\angle$ ACB = 124^o (Alt. $\angle$, BC // AE) ● $\angle$ BCA = 124 – 56 = 68^o ● $\angle$ BAC = 68^o (Base sides isos. Δ) ● $\angle$ ABC = 180 - 68^o - 68^o = 44^o

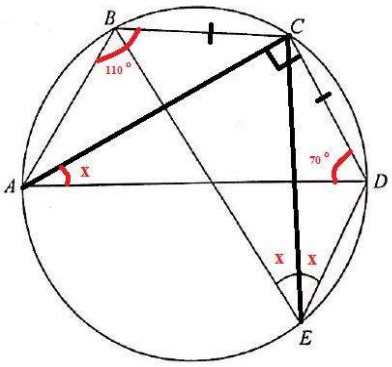
19.	**D**	黎 Sir 提提你 :  ● **AI = (9-5) + 2 = 6 and HI = (4 – 1) + (11 – 6) = 8** ● **AH =** $\sqrt{6^2+8^2}=10$

20.	**D**	**黎 Sir 提提你 :** ● $\angle ADB = x$ **(Alt. $\angle$, AD // BC)** ● **ED = EB (base sides of isos. Δ) $\Rightarrow$ ED = EB = EA** ● $\angle BAE = x$ **(Base $\angle$, isos. Δ)** ● **Consider ΔABE and ΔDBE** **BE = BE (Common), $\angle ABE = \angle DBE = x$ (Given), $\angle BAE = \angle BDE = x$** **$\Delta ABE \cong \Delta DBE$ (AAS)** ● $\angle ABC + \angle BAE = 4x = 180$ **(Interior angles, AD // BC)** $\Rightarrow 3x = 135^\circ$ ● **AB = BD (Corr. Sides, $\cong \Delta$)** 

21. **C**

黎 Sir 提提你 :

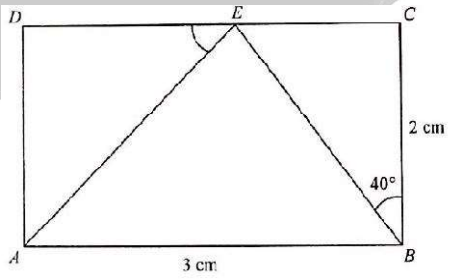
- $\angle CDA = 180 - 110 = 70^o$ **(Opp. Cyclic quad.)**
- **$x = 180 - 70 - 90 = 20^o$**
- $\angle CAD = \angle CED = x$ **($\angle$ in the same segment)**
- $\angle BEC = \angle CED = x$ **(Same chord $\Rightarrow$ Same Angle)**
- $\angle BED = 2x = 40^o$



22. **D**

黎 Sir 提提你 :

- **$EC = 2 \tan 40^o \Rightarrow EC = 1.678199262\ldots$**
- **$DE = 3 - 1.678199262 = 1.321800738\ldots$**
- $\tan\theta = \dfrac{2}{1.321800738} \Rightarrow \tan\theta = \dfrac{2}{1.321800738} \Rightarrow \theta = 56.53926935\ldots = 57^o$



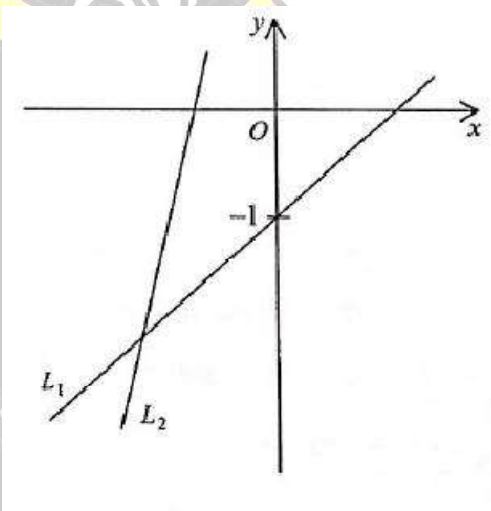
23. **A**

黎 Sir 提提你 :

- **L1:** $x+my=n$ **and L2:** $x+py=q \Rightarrow \begin{cases} L_1: y=-\frac{1}{m}x+\frac{n}{m} \\ L_2: y=-\frac{1}{p}x+\frac{q}{p} \end{cases}$
- **Given y-intercept of L1 = -1 $\Rightarrow$ n/m = -1 $\Rightarrow$ m = -n**
- **By inspection, Slope of L2 > Slope of L1 > 0**

$\Rightarrow -\frac{1}{p} > -\frac{1}{m} > 0 \Rightarrow m < p < 0 \Rightarrow$ **n > 0**

- **By inspection, y-intercept of L2 > 0 $\Rightarrow$ q/p > 0 $\Rightarrow$ q < 0**
- **Therefore, n > 0 and q < 0 $\Rightarrow$ n > q**
- **However, n > q but m < p $\Rightarrow$ n + m may be less than p + q.**



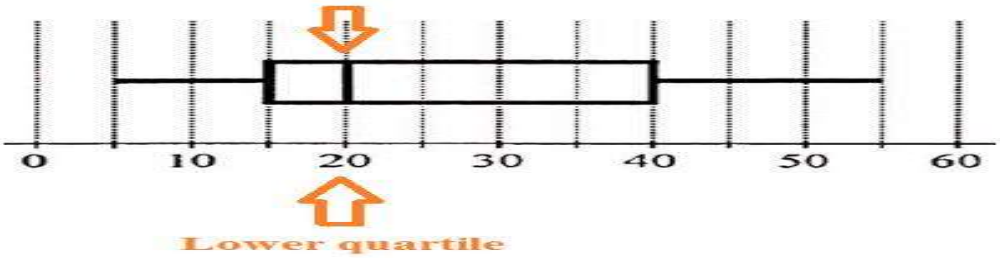
24.	**A**	**黎 Sir 提提你 :** ● $9x - 5y + 45 = 0 \Rightarrow y = (9/5)x + 9 \Rightarrow$ Slope = 9/5, y-intercept = 9 ● Let the equation of L be $y = mx + c$ ● L is perpendicular to $9x - 5y + 45 = 0 \Rightarrow m = -5/9$ ● Given $y = 0, x = -3 \Rightarrow 0 = -5/9(-3) + c \Rightarrow c = -15/9$ ● Therefore, the equation of L is $y = (-5/9)x + (-15/9) \Rightarrow 5x + 9y + 15 = 0$

25.	**C**	**黎 Sir 提提你 :** ● Let the perpendicular distance from Q to PR is h. ● Area of Δ POQ + Δ ROQ = Area of Δ PQR ● $\frac{1}{2}(3)(4)\sin 120^\circ + \frac{1}{2}(4)(6)\sin 60^\circ = \frac{1}{2}PR(h) \Rightarrow 2\sqrt{3}$ ● Remarks: If you draw a diagram of polar coordinates, everything is easy to understand !

26.	**A**	**黎 Sir 提提你 :** ● **Center of C1, G1 = (-4, 2) and Radius =** $\sqrt{(-4)^2+(2)^2-(-5)}=5$ ● **Center of C2, G2 = (-2, 1) and Radius =** $\sqrt{(-2)^2+(1)^2-(-2.5)}=\sqrt{7.5}$ ● **Slope of OG1 = (2-0)/(-2-0) = -1/2 = Slope of OG2 = (1 – 0)/(-2 – 0) = -1/2** ● **Therefore, G1, G2 and O are collinear** ● **OG1 =** $\sqrt{(-4)^2+(2)^2}=\sqrt{20}$ $\neq$ **OG1 =** $\sqrt{(-2)^2+(1)^2}=\sqrt{5}$

27.	**B**	**黎 Sir 提提你 :** ● **Center of the circle = (3, 2)** ● **AP = BP $\Rightarrow$ Center of the circle is one of the point on the locus of P !!!** **($\because$ Line from center perpendicular to chord bisect chord !)** ● **Substitude (3, 2) into x + 2y + k = 0 $\Rightarrow$ 3 + 2(2) + k = 0 $\Rightarrow$ k = -7**

28.	**C**	**黎 Sir 提提你 :** ● **(5 + 20) / (5 + 20 + 15 + 10 + 10) = 25 / 60 = 5 / 12**

29.	B	黎 Sir 提提你 : ● By inspection, Lower quartile = 15 
30.	B	黎 Sir 提提你 : ● $2 + 3 + 4 + 6 + 7 + 9 + 10 + m + n) = 41 + m + n = 5(9) \Rightarrow m + n = 4$ ● Therefore, m = 1 and n = 3 or m = n = 2 or m = 3 or n = 1. ● Therefore, the mode a = 2 or a = 3 ● Therefore, the median b = 4 (Do you know why?) ● Therefore, c = 10 – 1 = 9 or c = 10 – 2 = 8, c = 9 or c = 10 – 2 = 8
31.	D	黎 Sir 提提你 : ● y = f(x) and g(x) = f(x/2) $\Rightarrow$ g(x) is stretched in the x-direction by scale factor 2 ● (4, 0) $\overset{\times 2 \text{ in } x-\text{direction}}{\Rightarrow}$ (8, 10) and (-12, 0) $\overset{\times 2 \text{ in } x-\text{direction}}{\Rightarrow}$ (-24, 10) ● However, (0, 10) $\overset{\times 2 \text{ in } x-\text{direction}}{\Rightarrow}$ (0, 10) (Do you know why?)

32. **D**

黎 Sir 提提你 :

- $8^3+8^{19}=(2^3)^3+(2^3)^{19}=2^9+2^{57}=2^{4\times2+1}+2^{4\times14+1}=16^2\times2^1+16^{14}\times2^1$
  $=2\times16^2+2\times16^{14}$
- **Therefore,** $8^3+8^{19}=200\,0000\,0000\,0200_{16}$
  (16^{14} and 16^2)

33. **C**

黎 Sir 提提你 :

- **By y = mx + c** $\Rightarrow$ $\sqrt{y}=-\frac{8}{4}x+8$ $\Rightarrow$ $\sqrt{y}=-2x+8$
- $y=(-2x+8)^2$ $\Rightarrow$ $y=4x^2-32x+64$

34. **D**

黎 Sir 提提你 :

- $\begin{cases}\log_9 y=x-3\\ 2(\log_9 y)^2=4-x\end{cases}$
- **Let k =** $\log_9 y$ $\Rightarrow$ $\begin{cases}k=x-3\\ 2k^2=4-x\end{cases}$ $\Rightarrow$ $2(x-3)^2=4-x$ $\Rightarrow$
  $2x^2-11x+14=0$
- $x=3.5$ **or** $x=2$ $\Rightarrow$ $k=0.5$ or $k=-1$
- $\log_9 y=0.5$ **or** $\log_9 y=-1$ $\Rightarrow$ $y=9^{0.5}=3$ **or** $y=9^{-1}=1/9$

35. **B**

黎 Sir 提提你 :

- $\frac{5}{2-i}+ki=\frac{5(2+i)}{(2-i)(2+i)}+ki=\frac{10+5i}{4+1}+\frac{5ki}{5}=\frac{10+(5+5k)i}{5}=2+(1+k)i$
- **Since** $\frac{5}{2-i}+(1+k)i$ **is a real number** $\Rightarrow$ **1 + k = 0** $\Rightarrow$ **k = -1**

36. **C**

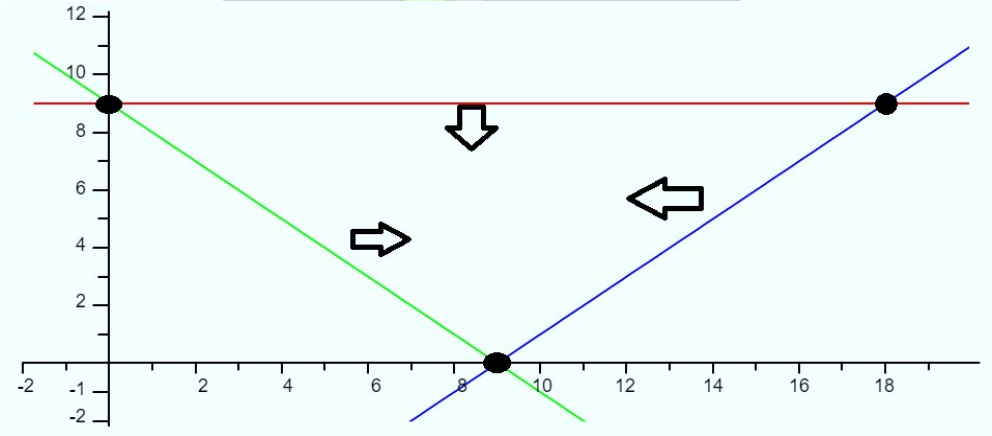
黎 Sir 提提你 :

- $\pi^{45}-\pi^{30}\neq\pi^{60}-\pi^{45}$
- $45\pi-30\pi=15\pi$, $60\pi-45\pi=15\pi$
- $(\pi-45)-(\pi-30)=-15$, $(\pi-60)-(\pi-45)=-15$

37. **C**

黎 Sir 提提你 :

- **The three intersection points are (0, 9), (18, 9), (9, 0)**
- **Substitute the intersection points into x – 2y + 43**
- **Only (9,0) gives the greatest value of 52**



38.	**A**	黎 Sir 提提你 : ● **AC** = $\sqrt{21^2+28^2}=35 \Rightarrow$ EC = $35-30=5$ cm ● **tan** $\angle$ DCA = 21/ 28 $\Rightarrow$ $\angle$ DCA = arc tan (21/ 28) ● **By cosine rule,** $DE=\sqrt{28^2+5^2-2(28)(5)\cos\angle DCA}=3\sqrt{65}$
39.	**A**	黎 Sir 提提你 : ● Cos $\angle BAD = \frac{15}{25} \Rightarrow \angle BAD$ = arc cos $(\frac{15}{25}) = 53.13^o$
40.	**B**	黎 Sir 提提你 : ● **Adding a straight line OB** $\Rightarrow$ OA = OB = OC (radii of circle ABC) ● $\angle$ **OAB = 90 – 68 = 22° (Tangent perpendicular radius)** ● $\angle$ OBA = **22° (Base** $\angle$ s or isos. Δ) ● $\angle$ OBC = **26° (Base** $\angle$ s or isos. Δ) ● $\angle$ ABC = 26 + 22 = 48° ● **Remarks: Andy finds that there should be at most 5-6 steps to solve the MC circle geometry problems. If you have to solve it more than 5-6 steps, you may fall in the trap and get in a wrong direction.**

41.	**D**	**黎 Sir 提提你 :** ● **By calculator, only inputting (0, 0), (7, 0), (0, 24) gives the in-center = (3, 3)** ● **Substituting (3, 3) into 3x + 4y = 3p gives p =7 $\Rightarrow$ p : q = 7 : 24** ● **Remarks: Andy strongly recommend candidates to deal with this type of question with calculator program, it only takes less than 1 minute to solve it.**
42.	**B**	**黎 Sir 提提你 :** ● $C_5^{13} \bullet C_4^6 = 19305$
43.	**C**	**黎 Sir 提提你 :** ● **P (Hits the target at most 3 times) = 1 – P (Hits the target exactly 4 times)** $= 1 - 0.7^4 = 0.7599$
44.	**B**	**黎 Sir 提提你 :** ● $\frac{x-\bar{x}}{\sigma} = z \Rightarrow \frac{45-33}{\sigma} = -2 \Rightarrow \sigma = 6$
45.	**A**	**黎 Sir 提提你 :** ● **Every datum is multiplied by 8 $\Rightarrow$ Mean x 8 and Interquartile range x 8** ● **Every datum is multiplied by 8 $\Rightarrow$ Variance x 8^2**

The end.

黎 Sir 簡介 Andy Lai BEng CUHK, MIEEE

Mathematics
Economics
Physics

- ✧ 畢業於香港中文大學電子工程學系，黎 Sir 教室創辦人之一.
- ✧ 超過 15 年教授中學文憑 / IB Diploma / GCE / HSC / SAT / AP / GCSE / IGCSE / IB MYP 課程經驗.
- ✧ 與學生面對新中學文憑試, 黎 Sir 親身上陣, 以實力於數學科, 物理科和經濟科奪取 5**,證明寶刀未老.
- ✧ 熟悉出題趨勢，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.
- ✧ 精心編制筆記，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，曾獲取的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.
- ✧ 任教科目：所有數學科，物理科，化學科，生物科，經濟科，商業科.

黎 Sir 教室學生佳績: Excellent Results

- ✧ 首屆香港中學文憑 (HKDSE)，多位學生取得 5/5*/5**級以上佳績. 更有學生考獲 5 科 5**級 2 科 5*級 1 科 5 級優異成績，在全港 72620 考生中，排名 28，入讀港大醫學院.
- ✧ 英國高考 (GCE AS/AL)，多位學生取得 A*/A 最高級別，更有學生考獲 5 科 A*.
- ✧ 國際文憑 (IB Diploma)，多位學生取得 6 / 7 級別，更有學生取得 44/45 總分.
- ✧ 英國會考 (IGCSE / GCSE)，多位學生取得 A / A*成績，更有學生取得 8 科 A*。
- ✧ 加拿大大學預科 (CESI) 數學課程 MCV4U，取得 98 / 100, 99 / 100 成績。
- ✧ 學生成功拔尖 (EAS)，提早入讀港大理學院和中大法律學院.
- ✧ 香港中學會考 (HKCEE)，多位學生取得 20 分以上佳績.
- ✧ 保加利亞國際數學競賽 (BIMC 2013) 隊際賽金牌.
- ✧ 奧數華夏杯/港澳杯/華杯，多位學生取得特等獎/金獎/一等獎/全港第二名.
- ✧ 還有更多，恕不能盡錄，詳情請瀏覽以下網址: www.andylai.hk/result.htm

黎 Sir 教室課程特色:

- ✧ 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 30 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.
- ✧ 詳情請瀏覽以下網址: www.andylai.hk

黎 Sir 教室 A Lai Learning Center

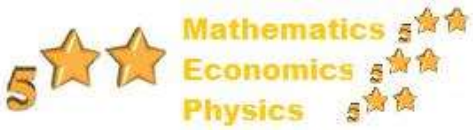
HKDSE / IB Diploma / GCE AS AL / AP / SAT / HSC

IGCSE / GCSE / IB MYP / KS3 / MO / F.1 – F.6 / Y9 – Y13

資深中學補習導師 小組補習 事半功倍!!!

黎 Sir 簡介 Andy Lai

BEng CUHK, MIEEE



- ✧ 畢業於香港中文大學，黎 Sir 教室創辦人之一.
- ✧ 超過 16 年教授 中學文憑 / IB Diploma / GCE / HSC / SAT / AP / GCSE / IGCSE / IB MYP 課程經驗.
- ✧ 與學生面對新中學文憑試, 黎 Sir 親身上陣, 於數學科, 物理科和經濟科奪取 5**, 證明寶刀未老.
- ✧ 現於黎 Sir 教室任教補習班，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大型英資電腦公司，負責主理該公司所代理的全球大型美資電腦公司儲存系統銷售業務.
- ✧ 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，希望將自己的一套學習方法教授學生.

黎 Sir 教室 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 30 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

地鐵: 旺角 E2 出口，油麻地 A2 出口

小巴: 1, 1A, 2, 3C, 6, 6C, 6F, 9, 30X, 35A, 41A, 42A, 60X, 63X, 68X, 69X, 81S, 87D, 93K, 95, 104, 117, 203, 212, 230X, 234P, 234X, 238P, 238S, 259B, 270P, 281A

小巴: 21K, 74, 74S

黎Sir教室 A Lai Learning Center

上課地址: 香港九龍旺角煙廠街 9 號興發商業大廈 706 室.

查詢熱線: 6772 3001

電郵地址: enquiry@andylai.hk

網址: www.andylai.hk