

HONG KONG ATTAINMENT TEST

香港學科測驗

Pre-Secondary One

中一入學前

Mathematics

數學

Mock Paper 1

模擬試卷(一)

Time allowed for the test: 50 minutes

測驗時間：50分鐘

Instructions:

1. This test contains two sections:
Section A: Questions 1-30
Section B: Questions 31-36
2. Answer ALL questions.
3. Write your answers on the answer sheet.
4. Write your name, class and class number on the answer sheet.
5. You may do your rough work in the blank space of this test booklet and there is no need to rub it out after the test.
6. The use of calculator is not allowed.

學生須知：

1. 本測驗卷共有兩部分：
甲部：第1至第30題
乙部：第31至第36題
2. 全部題目均須作答。
3. 把答案寫在答題紙上。
4. 在答題紙上填寫學生姓名、班別及學號。
5. 學生可利用本測驗卷的空白部分做算草，測驗完畢後無須將算草擦去。
6. 不准使用計算機。



CLASSROOM Pre-Secondary One Mathematics Mock Papers (P.6)

課室中一入學前數學科模擬試卷(小六)



Note:

Not all diagrams are drawn to scale.

注意：

部分附圖不依比例繪畫。

SECTION A (60 marks)

Choose the correct answer. You only need to write down the letter preceding the selected answer.

甲部 (60分)

選出正確的答案。學生只須填上所選答案前的英文字母。

1. The savings of Mandy were one hundred and twenty thousand dollars when corrected to the nearest ten thousand. Which of the following can be the actual savings of Mandy?

- A. \$114 890
- B. \$124 685
- C. \$126 032
- D. \$1 203 556

1. 可芯的儲蓄取近似值至萬位後為十二萬元。以下哪一項可能是可芯實際的儲蓄？

- A. \$114 890
- B. \$124 685
- C. \$126 032
- D. \$1 203 556

2. If $25 \times \star = 5 \times \bullet$, then $\star = ?$

- A. 5
- B. 25
- C. $5\bullet$
- D. $\frac{\bullet}{5}$

2. 如果 $25 \times \star = 5 \times \bullet$ ，那麼 $\star = ?$

- A. 5
- B. 25
- C. $5\bullet$
- D. $\frac{\bullet}{5}$

3. What is the result of adding up all the factors of 45?

- A. 78
- B. 77
- C. 33
- D. 32

3. 把45的所有因數相加的結果是多少？

- A. 78
- B. 77
- C. 33
- D. 32

4. The first six multiples of x are :
 $x, 36, 54, 72, 90, 108$
Which of the following is **not** a factor
of x ?

- A. 2
- B. 4
- C. 6
- D. 9

4. x 的首 6 個倍數是：
 $x, 36, 54, 72, 90, 108$
下列哪一個數 **不是** x 的因數？

- A. 2
- B. 4
- C. 6
- D. 9

5. If $\frac{8}{\star} = \frac{\clubsuit}{55}$ and $\frac{8}{\star}$ is a proper
fraction, what numbers can \star and \clubsuit
be?

- A. $\star = 5, \clubsuit = 11$
- B. $\star = 9, \clubsuit = 56$
- C. $\star = 10, \clubsuit = 48$
- D. $\star = 11, \clubsuit = 40$

5. 如果 $\frac{8}{\star} = \frac{\clubsuit}{55}$ ，且 $\frac{8}{\star}$ 是真分數，
那麼 \star 和 \clubsuit 可能是什麼數字？

- A. $\star = 5, \clubsuit = 11$
- B. $\star = 9, \clubsuit = 56$
- C. $\star = 10, \clubsuit = 48$
- D. $\star = 11, \clubsuit = 40$

6. It took 23 seconds to delete 345
photos. How many seconds would it
take to delete 420 photos at the same
speed?

- A. 18 seconds
- B. 26 seconds
- C. 27 seconds
- D. 28 seconds

6. 刪除 345 張照片用了 23 秒。如果
以相同的速度刪除 420 張照片，
要用多少秒？

- A. 18 秒
- B. 26 秒
- C. 27 秒
- D. 28 秒

7. Winnie has $3\frac{1}{8}$ L of apple juice, which is $1\frac{3}{4}$ L more than the orange juice she has. How much juice does Winnie have?

- A. 8L
- B. $4\frac{7}{8}$ L
- C. $4\frac{1}{2}$ L
- D. $1\frac{3}{8}$ L

7. 惠明有 $3\frac{1}{8}$ L 蘋果汁，比她的橙汁多 $1\frac{3}{4}$ L。惠明共有果汁多少？

- A. 8L
- B. $4\frac{7}{8}$ L
- C. $4\frac{1}{2}$ L
- D. $1\frac{3}{8}$ L

8. The table below shows the height of four children.

Child 小童	Height 身高
Carl 凱恩	$\frac{23}{25}$ m
Jay 衛傑	0.88m
Gavin 博文	1.09m
Eric 志建	$1\frac{3}{20}$ m

Whose height is closest to 1m?

- A. Carl
- B. Jay
- C. Gavin
- D. Eric

8. 下表顯示四名小童的身高。

誰的身高最接近 1m？

- A. 凱恩
- B. 衛傑
- C. 博文
- D. 志建

9. There were 360 eggs in the restaurant. Last week, $\frac{5}{9}$ of the eggs were used. This week, the number of eggs bought was $\frac{3}{8}$ of that used last week. How many eggs were bought this week?

- A. 210
- B. 200
- C. 135
- D. 75

9. 餐廳有 360 隻雞蛋，上星期用去 $\frac{5}{9}$ ，本星期購入雞蛋的數目是上星期用去的 $\frac{3}{8}$ 。本星期購入雞蛋多少隻？

- A. 210
- B. 200
- C. 135
- D. 75

Charge for Posting Parcel

郵寄包裹收費

First 1 kilogram 首 1 公斤	\$27.5
Every 1 kilogram thereafter 以後每 1 公斤 (1-kg rate is charged for weight less than 1 kilogram) (不足 1 公斤亦以 1 公斤收費計算)	\$10

10. My father posted a parcel of 2.8 kilograms. How much should he pay?

- A. \$28
- B. \$45.5
- C. \$47.5
- D. \$77

10. 爸爸寄了一個重 2.8 公斤的包裹，他須付郵費多少？

- A. \$28
- B. \$45.5
- C. \$47.5
- D. \$77

11. A group of 8 people rented a basketball room together and each paid \$55. Later the staff found that he had made a mistake in the bill and refunded \$32 to the group. How much did each person actually pay?

- A. \$59
- B. \$51
- C. \$36
- D. \$23

11. 8人一起租用籃球室，每人付了\$55。後來職員發現賬單出錯，退還\$32給他們。每人實際付款多少？

- A. \$59
- B. \$51
- C. \$36
- D. \$23

12. Tina had savings of \$105 while her sister had \$93. Each of them used $\frac{3}{4}$ of their savings to buy a musical box and \$4.8 was left. How much did the musical box cost?

- A. \$153
- B. \$148.5
- C. \$143.7
- D. \$44.7

12. 玉婷有儲蓄\$105，妹妹有儲蓄\$93，她們各拿出儲蓄的 $\frac{3}{4}$ ，一起購買一個音樂盒，還餘下\$4.8。這個音樂盒的售價是多少？

- A. \$153
- B. \$148.5
- C. \$143.7
- D. \$44.7

13. Which of the following expressions has the value less than 1?

- A. $0.6 \div 0.6$
- B. $0.6 \div 0.06$
- C. $0.06 \div 0.06$
- D. $0.66 \div 6$

13. 下列哪一算式的值小於1？

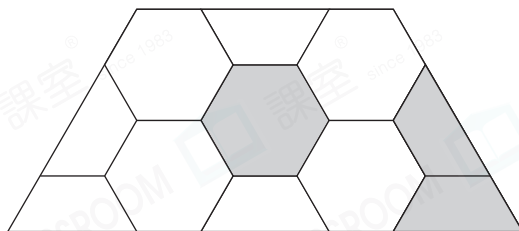
- A. $0.6 \div 0.6$
- B. $0.6 \div 0.06$
- C. $0.06 \div 0.06$
- D. $0.66 \div 6$

14. A storekeeper put 42.1kg of jam into cans of 400g each. How many cans of jam did he have? How much jam was left?

- A. 105 cans, with 0.1kg left
- B. 104 cans, with 1kg left
- C. 15 cans, with 0.1kg left
- D. 10 cans, with 2.5kg left

14. 店主把 42.1kg 果醬每 400g 包裝成一罐，可包裝成多少罐？餘下果醬多少？

- A. 105 罐，餘下 0.1kg
- B. 104 罐，餘下 1kg
- C. 15 罐，餘下 0.1kg
- D. 10 罐，餘下 2.5kg

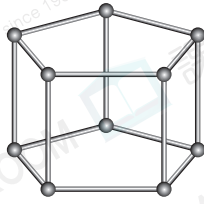


15. In the above figure, what percentage of the figure is shaded?

- A. $\frac{1}{4}\%$
- B. 25%
- C. $27\frac{3}{11}\%$
- D. 30%

15. 上圖中，陰影部分佔全圖的百分之幾？

- A. $\frac{1}{4}\%$
- B. 25%
- C. $27\frac{3}{11}\%$
- D. 30%

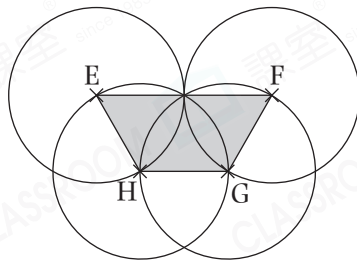


16. The above pentagonal prism is formed by 15 sticks of the same length and 10 plastic beads. This pentagonal prism is restructured to form three triangular prisms. How many extra sticks and plastic beads are needed at least?

- A. 1 stick and 9 plastic beads
- B. 6 sticks and 4 plastic beads
- C. 12 sticks and 7 plastic beads
- D. 12 sticks and 8 plastic beads

16. 上圖的五角柱由15枝長度相同的竹簽和10粒膠珠組成。把這五角柱分拆重組成3個三角柱，最少額外需要多少竹簽及膠珠？

- A. 1枝竹簽和9粒膠珠
- B. 6枝竹簽和4粒膠珠
- C. 12枝竹簽和7粒膠珠
- D. 12枝竹簽和8粒膠珠

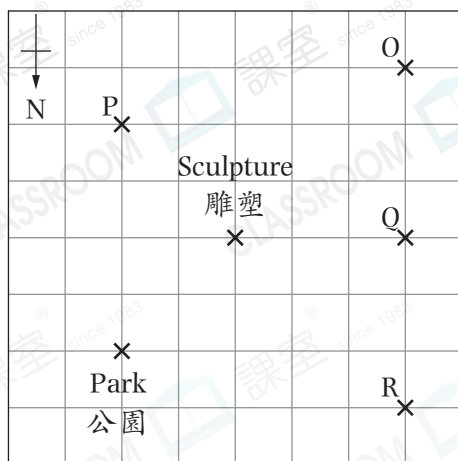


17. In the above figure, E, F, G and H are the centres of 4 circles of the same size. EFGH is a trapezium, and its perimeter is 60cm. What is the diameter of a circle?

- A. 12cm
- B. 15cm
- C. 24cm
- D. 30cm

17. 上圖中，E、F、G和H是4個大小相同的圓的圓心，EFGH是一個梯形，它的周界是60cm。那麼一個圓的直徑是多少？

- A. 12cm
- B. 15cm
- C. 24cm
- D. 30cm

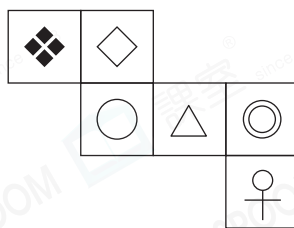


18. Jacky went for a picnic with families. Their destination was the Park. After walking for some time, they found that the Sculpture was southeast from them. What was their location at that time on the map?

- A. O
- B. P
- C. Q
- D. R

18. 俊偉和家人一起野餐，目的地是公園。行了一段時間後，他們測得雕塑是在他們的東南方。他們當時是在地圖中的哪一個位置？

- A. O
- B. P
- C. Q
- D. R



19. When the above net is folded into a box, is at the bottom. Which of the following is the top of the box?



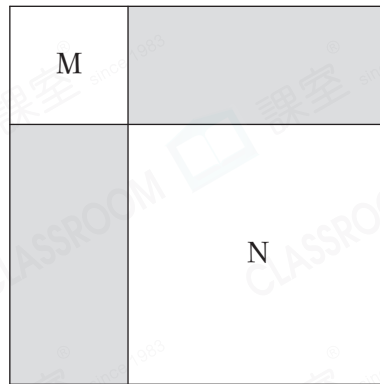
19. 當把上圖摺紙圖樣摺成盒子後， 是盒子的底部。該盒子的頂部是以下哪一個圖樣？

20. A rope of length 72cm is used to form a rectangle. If its length is 3 times its width, what is the area of the rectangle?

- A. 54cm^2
- B. 243cm^2
- C. 432cm^2
- D. 1728cm^2

20. 用一條長 72cm 的繩子圍出一個長方形。如果長度是闊度的 3 倍，這個長方形的面積是多少？

- A. 54cm^2
- B. 243cm^2
- C. 432cm^2
- D. 1728cm^2

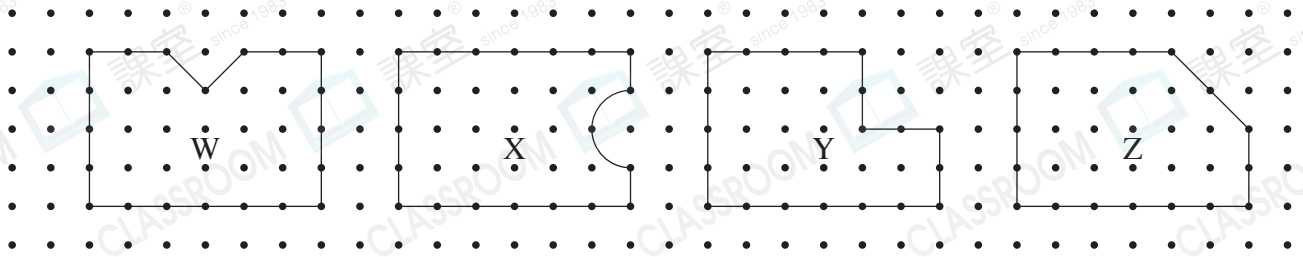


21. In the above figure, M and N are squares. The perimeters of M and N are 20cm and 44cm respectively. What is the difference of the area between the shaded part and the white part?

- A. 256cm^2
- B. 146cm^2
- C. 110cm^2
- D. 36cm^2

21. 上圖中，M和N是正方形，它們的周界分別是20cm和44cm。陰影部分與白色部分的面積相差多少？

- A. 256cm^2
- B. 146cm^2
- C. 110cm^2
- D. 36cm^2

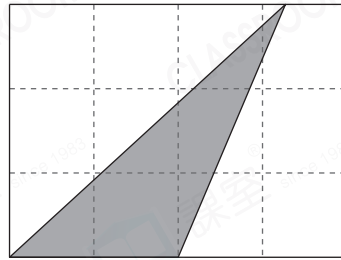


22. Which of the above figures has the longest perimeter?

- A. W
- B. X
- C. Y
- D. Z

22. 以上哪個圖形的周界是最長的？

- A. W
- B. X
- C. Y
- D. Z

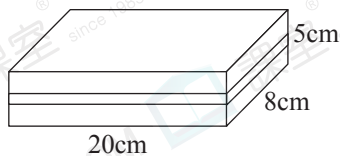


23. The above rectangle is formed by twelve squares of the same size. The perimeter of the rectangle is 28cm. What is the area of the shaded part?

- A. 12cm^2
- B. 16cm^2
- C. 24cm^2
- D. 48cm^2

23. 上圖的長方形是由12個大小相同的正方形組成，該長方形的周界是28cm。陰影部分的面積是多少？

- A. 12cm^2
- B. 16cm^2
- C. 24cm^2
- D. 48cm^2

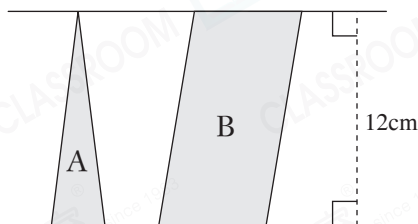


24. The above figure is a cuboid cake. To get the largest cube, how much should be cut off from the cuboid?

- A. 800cm^3
- B. 675cm^3
- C. 512cm^3
- D. 125cm^3

24. 上圖是一件長方體蛋糕，要把蛋糕切去多少才可得到一個最大的正方體？

- A. 800cm^3
- B. 675cm^3
- C. 512cm^3
- D. 125cm^3



25. In the above figure, A is a triangle and B is a parallelogram. The base of B is twice of the base of A. If the area of B is 72cm^2 , what is the area of A?

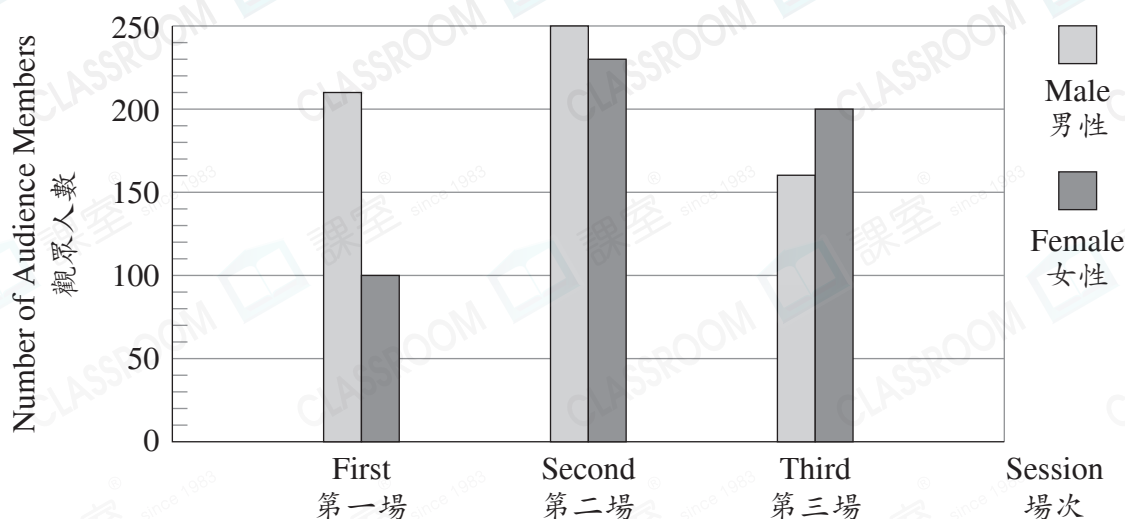
- A. 18cm^2
- B. 36cm^2
- C. 48cm^2
- D. 72cm^2

25. 上圖中，A是一個三角形，B是一個平行四邊形。B的底是A的兩倍。如果B的面積是 72cm^2 ，那麼A的面積是多少？

- A. 18cm^2
- B. 36cm^2
- C. 48cm^2
- D. 72cm^2

Number of Audience Members of Each Session of a Musical

音樂劇各場次的觀眾人數



26. According to the above graph, which descriptions in the following are correct?

- I. The total number of male audience members of the musical is 620.
 - II. The difference of the number of audience members between the first and the second session of the musical is 70.
 - III. In the third session musical, the number of female audience members is $\frac{5}{9}$ of the total number of audience members.
- A. I and II only
B. I and III only
C. II and III only
D. I, II and III

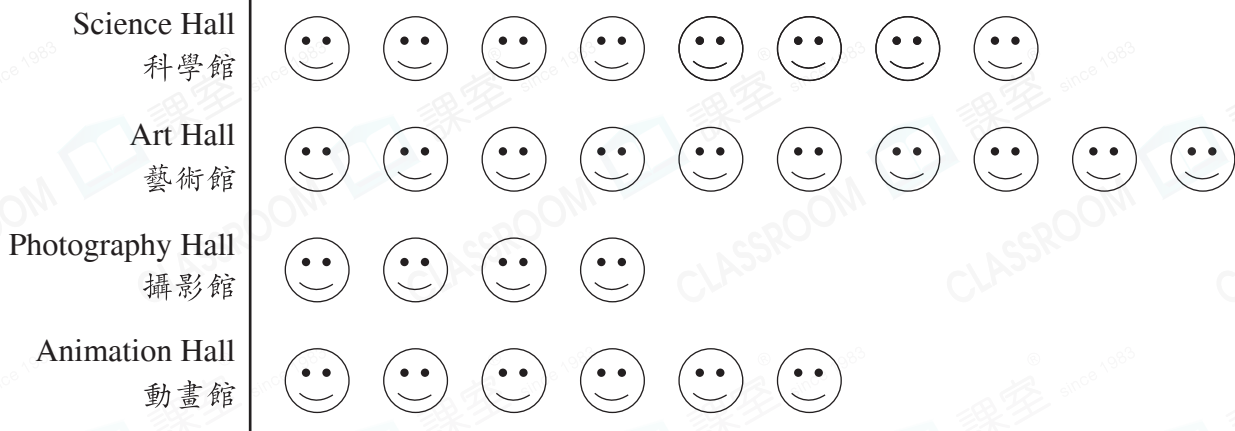
26. 根據上圖，下列哪些描述是正確的？

- I. 音樂劇男性觀眾的總人數是 620 人。
 - II. 音樂劇第一場和第二場的觀眾人數相差 70 人。
 - III. 在第三場音樂劇中，女性觀眾人數是觀眾總人數的 $\frac{5}{9}$ 。
- A. 只有 I 及 II
B. 只有 I 及 III
C. 只有 II 及 III
D. I、II 及 III

Number of Visitors to the Four Exhibition Halls Yesterday

昨天四個展覽館的參觀人次

Each  stands for 100 visitors
每個  代表100人次



27. According to the above graph, what is the difference between the number of visitors to the exhibition hall with the least visitors and the average number of visitors to each exhibition hall?

- A. 300
- B. 400
- C. 500
- D. 700

27. 根據上圖，參觀人次最少的展覽館的參觀人次和平均每個展覽館的參觀人次相差多少？

- A. 300
- B. 400
- C. 500
- D. 700

28. There were originally 5 members in the basketball team. Their average weight was 70kg. After Tom joins the team, their average weight is 68kg. What is the weight of Tom?

- A. 58kg
- B. 60kg
- C. 68kg
- D. 72kg

28. 籃球隊原有5名隊員，他們的平均體重是70kg。佑天加入球隊後，隊員的平均體重是68kg。佑天的體重是多少？

- A. 58kg
- B. 60kg
- C. 68kg
- D. 72kg

29. A fork cost \$ x . There was a reduction of \$4 for buying 6 forks, \$8 for buying 12 forks, \$12 for buying 18 forks and so on. The manager of a restaurant bought 48 forks. How much should he pay?

- A. $\$(48x - 36)$
- B. $\$(48x - 32)$
- C. $\$(24x - 36)$
- D. $\$(24x - 32)$

29. 每把叉子售 \$ x 。若購買6把可減\$4，購買12把可減\$8，購買18把可減\$12，如此類推。餐廳經理買了48把叉子，他應付款多少？

- A. $\$(48x - 36)$
- B. $\$(48x - 32)$
- C. $\$(24x - 36)$
- D. $\$(24x - 32)$

30. If $\frac{t}{2} = 24$, then $2t = ?$

- A. 98
- B. 96
- C. 86
- D. 78

30. 如果 $\frac{t}{2} = 24$ ，那麼 $2t = ?$

- A. 98
- B. 96
- C. 86
- D. 78

End of Section A

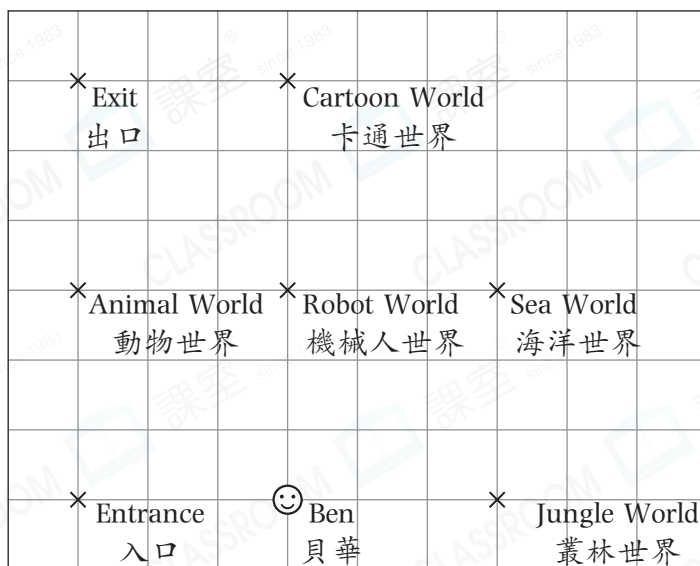
甲部完

SECTION B (40 marks)

Working steps must be shown in answering questions in this section unless specified otherwise.

乙部 (40分)

除特別指明外，在回答本部問題時，須列出計算步驟。



31. The above figure shows the floor plan of Adventure Park.

(a) The Entrance was south of the Jungle World. Ben ☺ wanted to go to the Animal World. To get the shortest route, in which direction should he go? (Give the answer only) [2 marks]

(b) The price of each admission ticket is \$100. The Adventure Park sold 29378 tickets last week. How much did the Adventure Park get from the admission tickets when corrected to the nearest ten thousand dollars? (Give the answer only) [2 marks]

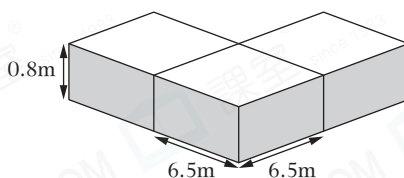
31. 上圖是歷險樂園的平面圖。

(a) 入口在叢林世界的南方，貝華 ☺想到動物世界，他應向哪一個方向走，路程才是最短的？(只須寫出答案) [2分]

(b) 每張門票售\$100，歷險樂園上星期共售出29378張門票。把門票收入取近似值至萬位應是多少？(只須寫出答案) [2分]

31. (c) There was a stage at the entrance, which was 0.8m high. It was formed by 3 quadrilateral prisms of the same size and same shape. The base of each quadrilateral prism was a rhombus of side 6.5m. Some faces of the stage were covered by red cloth, as shown in the shaded part below. What was the total area of the red cloth?

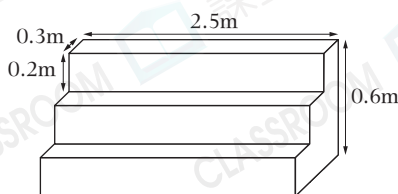
[4 marks]



31. (c) 入口處設有舞台，舞台高0.8m，它是由三個大小和形狀相同的四角柱拼砌而成。四角柱的底是一個菱形，邊長是6.5m。舞台的一些面鋪上了紅布，如下圖陰影部分所示。紅布的總面積是多少？ [4分]

32. (a) A shoe store bought 192 pairs of shoes. $\frac{7}{12}$ of them were women's shoes. How many pairs of men's shoes were there? [4 marks]

(b) There is a display stand for men's new shoes in the shoe store. The stand is 2.5m long, as shown below. Each floor of the stand has the same width and same height. What is the volume of the stand? (Give the answer only) [2 marks]

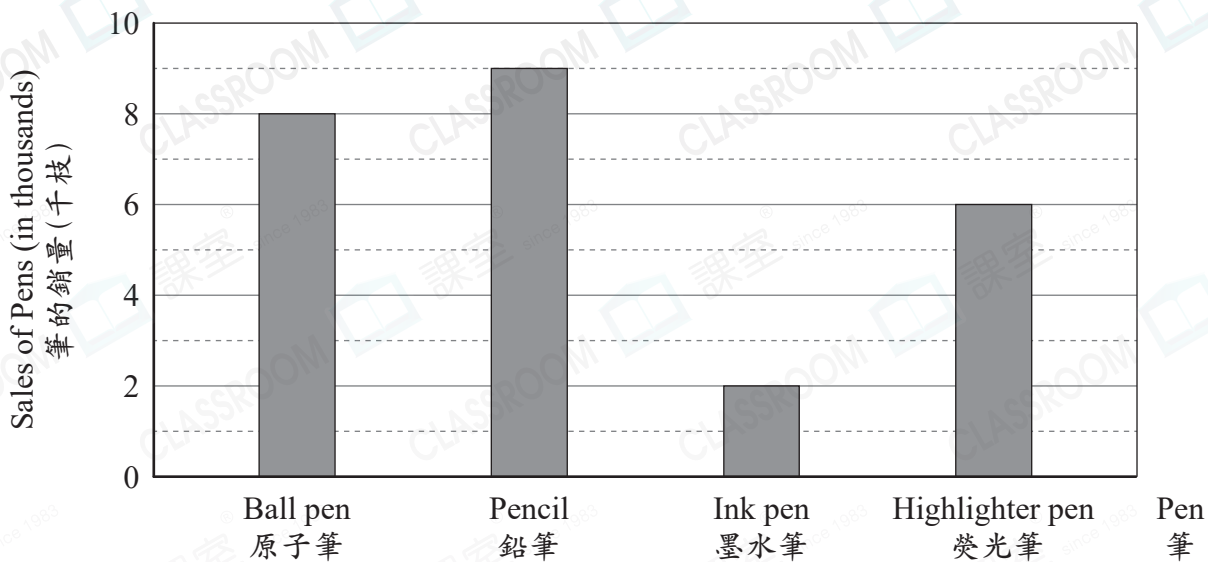


32. (a) 鞋店購入192雙鞋子，其中 $\frac{7}{12}$ 是女鞋，男鞋有多少雙？ [4分]

(b) 鞋店裏有一個放新款男鞋的展示台，展示台長2.5m，如下圖所示。展示台上每層的闊度相等，高度亦相同。這個展示台的體積是多少？(只須寫出答案) [2分]

Sales of Pens in Lisa's Stationery Shop Last Month

莉莎文具店上月筆的銷量



33. (a) The sales amount of the ball pens and the highlighter pens were the same last month. The price of each ball pen was \$9. What was the price of each highlighter pen?

[4 marks]

- (b) What was the average sales of each type of pen last month? (Give the answer only)

[2 marks]

- (c) Lisa's Stationery Shop also sells notebooks. The original price of each notebook was \$16.8. 2 extra notebooks would be given for any purchase of 4 notebooks. How much would each notebook cost on average?

[4 marks]

33. (a) 上月原子筆和螢光筆的銷售額相同。每枝原子筆的售價是\$9，每枝螢光筆的售價是多少？






[4分]

- (b) 上月平均每種筆的銷量是多少？(只須寫出答案)

[2分]

- (c) 莉莎文具店亦有售賣筆記簿，每本的原價是\$16.8，如果買4本，將可多得2本。平均每本筆記簿的售價將會是多少？

[4分]

	Overtime (Hours) 加班時間 (小時)	
Employee 員工	Sammy 子妮	Henry 國恆
Monday 星期一	1.6	3.3
Tuesday 星期二		0.5
Wednesday 星期三		
Thursday 星期四	3.2	
Friday 星期五	2.7	4.1
Average 平均時間		2.06

34. The above table shows the hours of overtime by two employees last week.

(a) If Henry's overtime on Wednesday and Thursday were the same, what was his overtime on Wednesday?

[4 marks]

(b) Sammy's overtime was shorter than 3.5 hours each day. According to the above table, would Sammy's average overtime reach 3 hours last week? Explain.

[4 marks]

34. 上表是上星期兩位員工的加班時間。

(a) 如果國恆星期三和星期四的加班時間相同，他星期三的加班時間是多少小時？ [4分]

(b) 子妮每天的加班時間少於3.5小時。根據上表，上星期子妮的平均加班時間會否達至3小時？試解釋。 [4分]

35. (a) Bill had 4 packs of geo-strips.
There were 28 geo-strips in each pack and $\frac{2}{7}$ of them were 20cm in length. How many geo-strips with 20cm in length did he have?
(Give the answer only) [2 marks]

(b) Bill wanted to use the geo-strips with 20cm to form a rhombus. On the answer sheet, complete this rhombus. [2 marks]

36. Jack had x postcards. After sending 18 postcards to relatives and 22 postcards to friends, he had 15 postcards left. How many postcards did Jack have originally?
(Use equation to solve the problem and show your working) [4 marks]

35. (a) 裕標有4包幾何條。每包有28條幾何條，其中 $\frac{2}{7}$ 的長度是20cm。他有長度是20cm的幾何條多少條？(只須寫出答案) [2分]

(b) 裕標打算用20cm的幾何條組成一個菱形。在答題紙上，完成這個菱形。 [2分]

36. 杰森有 x 張明信片，寄了18張給親戚和22張給朋友後，他還剩15張。杰森原有明信片多少張？(須用方程列式計算，並展示步驟) [4分]