

2024-2025 中二
上學期統測一
數學

2024 – 2025
中二級上學期統測一

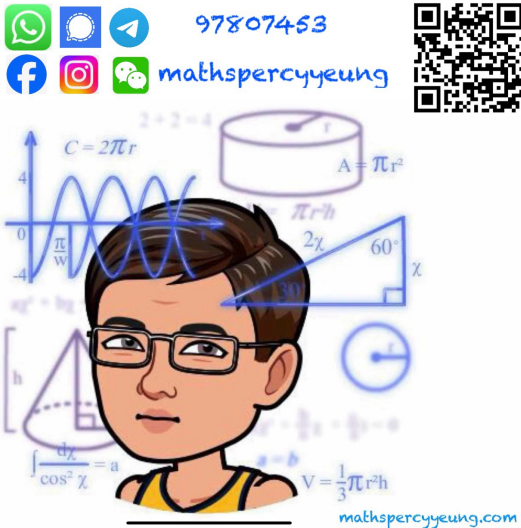
數學
試題答題簿

本試卷中文試題必須用中文作答
英文試題必須用英文作答

二零二四年十月三十一日
一小時完卷
(上午八時十五分至上午九時十五分)

考生須知

- (一) 宣布開考後，考生須首先在第 1 頁的適當位置填寫學生姓名、班別及學號。
- (二) 本試卷各題均須作答，答案須寫在本試題答題簿中預留空位內。
- (三) 除特別指明外，須詳細列出所有算式。
- (四) 本試卷的附圖不一定依比例繪成。
- (五) 除特別指明外，數值答案須用真確值，或準確至三位有效數字的近似值表示。



部 份	分 數
甲 (1 – 2)	
甲 (3 – 10)	
甲部	/47
乙部	/23
全卷	/70

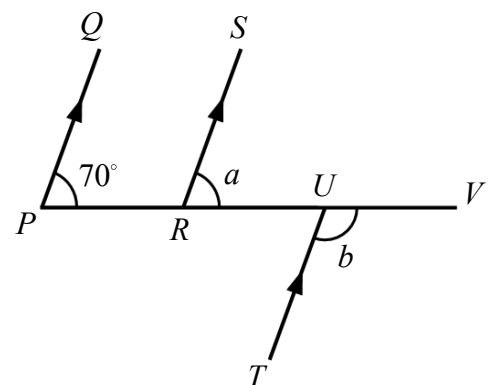
甲部 (47 分)

1. 解方程 $\frac{7-5x}{6}=7$ 。

(3 分)

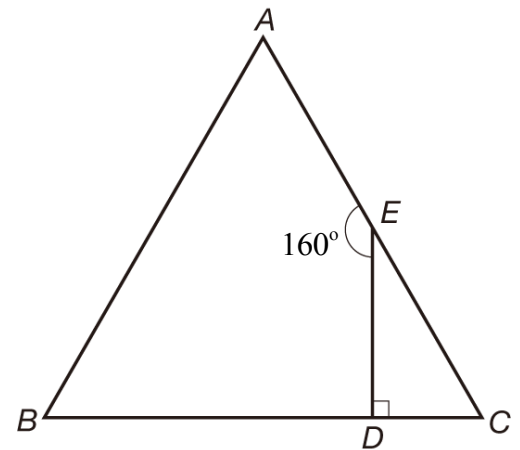
2. In the figure, $PRUV$ is a straight line. Find a and b .

(4 marks)



3. In the figure, BDC and AEC are straight lines. $AB = AC$, $ED \perp BC$ and $\angle AED = 160^\circ$. Find $\angle BAC$.

(4 marks)



4. For a regular n -sided polygon,

- (a) express the size of an exterior angle of the polygon in terms of n , (1 mark)
- (b) the size of an interior angle of the polygon is 11 times the size of its exterior angle, find the value of n . (4 marks)

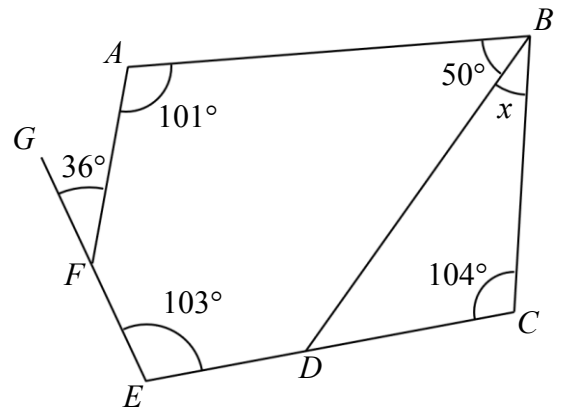
5. In the figure, CDE and EFG are straight lines.

(a) Find x .

(3 marks)

(b) Is $\triangle BCD$ an isosceles triangle? Explain your answer.

(3 marks)



6. It is given that $\triangle ABC \cong \triangle XYZ$. $\angle BAC = 30^\circ$, $\angle ABC = 90^\circ$, $AB = 5$ cm and $XZ = 10$ cm.

(a) Find AC .

(2 marks)

(b) Find XY .

(2 marks)

(c) Find $\angle YZX$.

(3 marks)

7. In the figure, $AC = DB$, $AB \parallel CD$ and $\angle BCD = 90^\circ$.

(a) Prove that $CB \perp AB$.

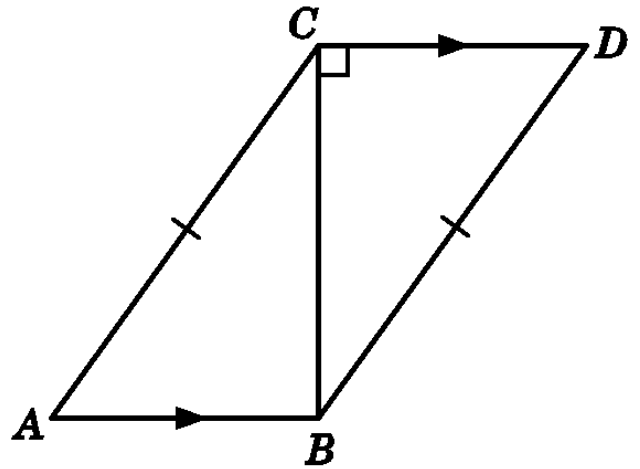
(1 mark)

(b) Prove that $\triangle ABC \cong \triangle DCB$.

(3 marks)

(c) If $\angle CAB = 65^\circ$, find $\angle CBD$.

(2 marks)



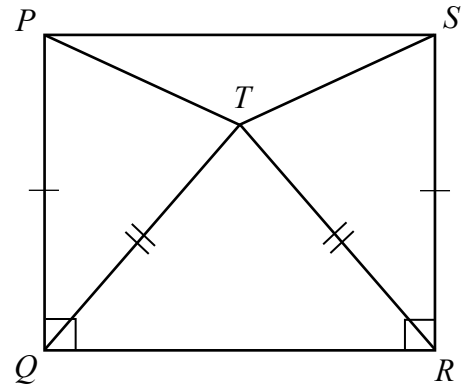
8. In the figure, $PQ = SR$, $QT = RT$, $PQ \perp QR$ and $SR \perp QR$.

(a) Prove that $\triangle PQT \cong \triangle SRT$.

(3 marks)

(b) Prove that $\angle TPS = \angle TSP$.

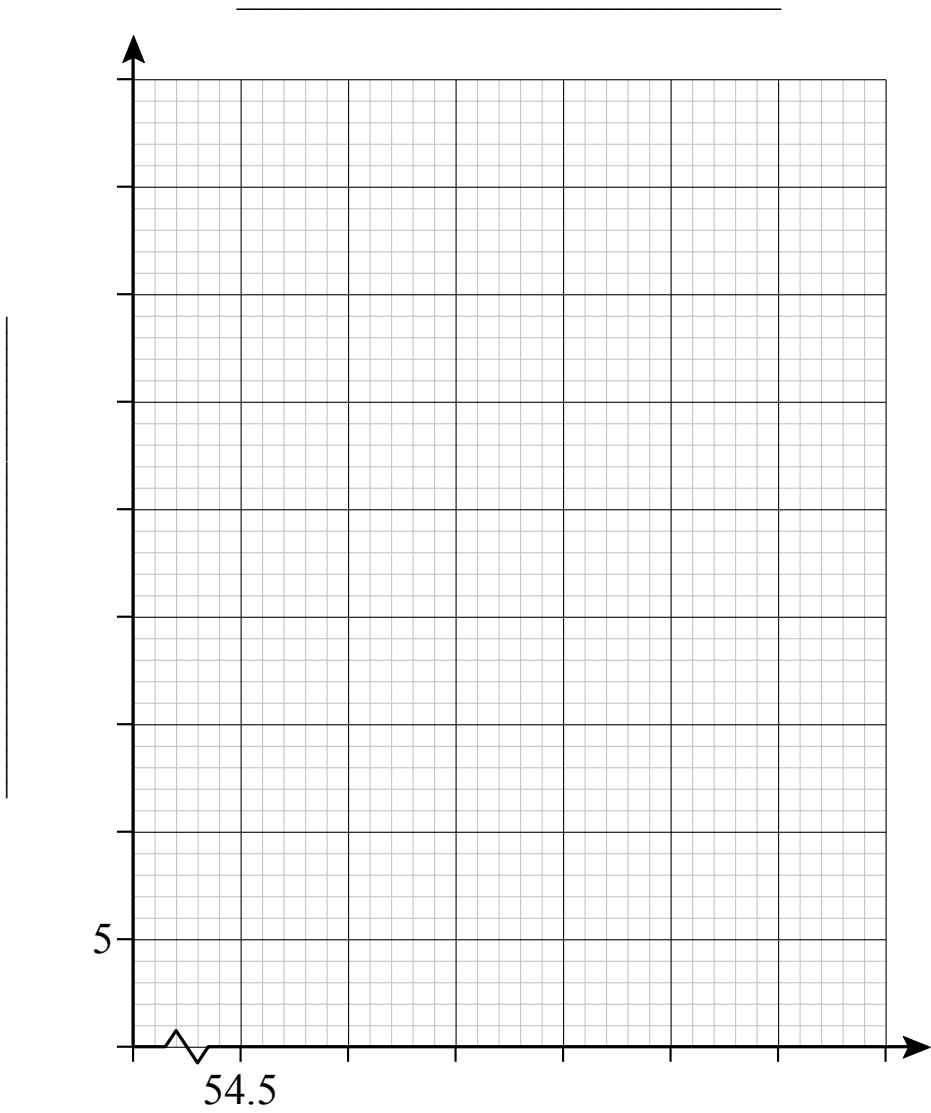
(2 marks)



9. 下表所示為一些樓房的面積。

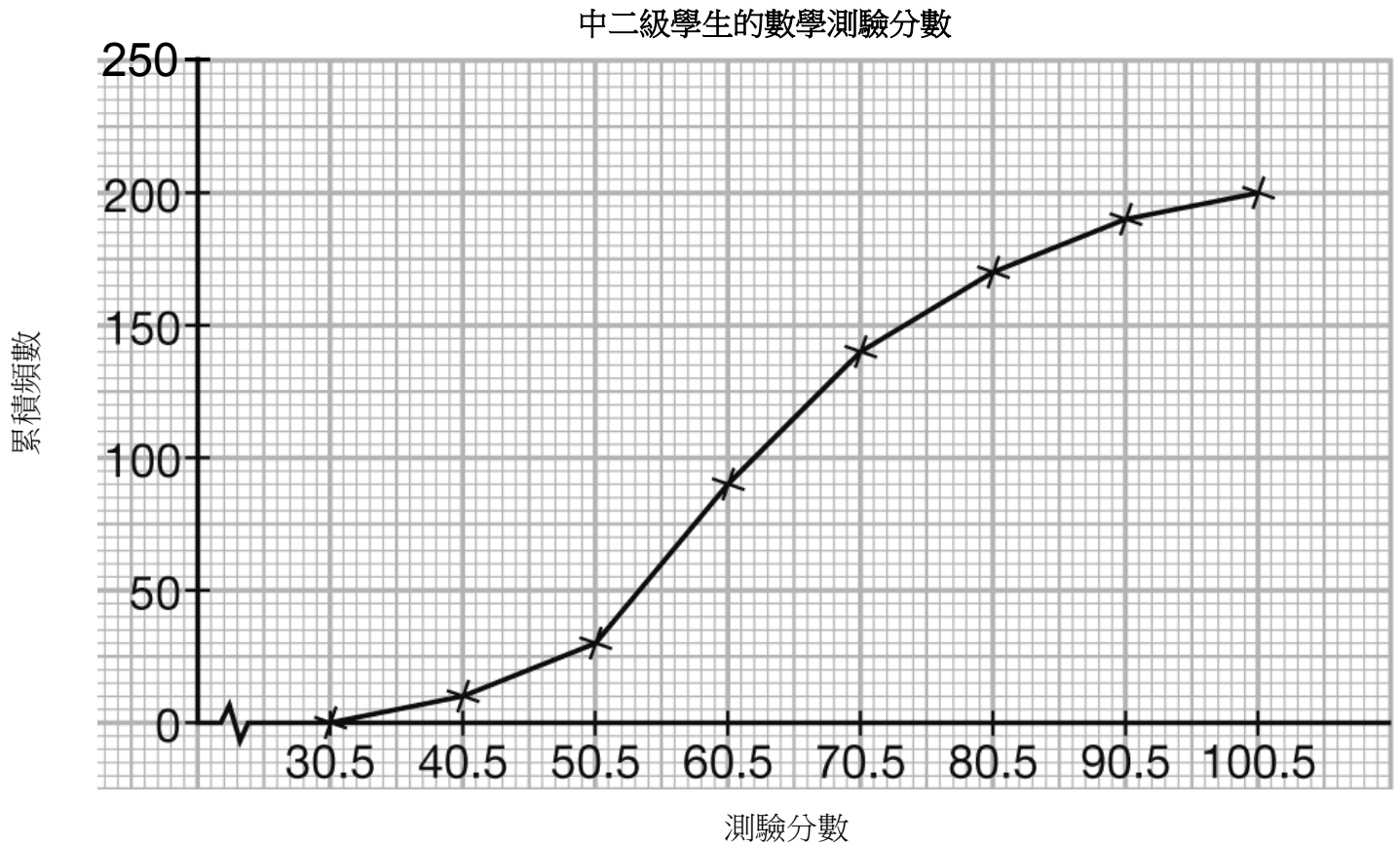
面積 (m ²)	60 – 69	70 – 79	80 – 89	90 – 99	100 – 109
組中點 (m ²)					
頻數	2	15	36	40	27

- (a) 完成上表。(2 分)
- (b) 求樓房的總數。(1 分)
- (c) 由此，作一頻數多邊形展示所得的數據。(4 分)



乙部 (23 分)

10. 圖中的累積頻數多邊形顯示中二級學生的數學測驗分數。



(a) 求數學測驗中的學生總數。

(1 分)

(b) 完成下表。

(2 分)

測驗分數	頻數
31 – 40	10
41 – 50	
51 – 60	
61 – 70	
71 – 80	
81 – 90	
91 – 100	

(c) 求分數為 60.5 或以上，但少於 80.5 的學生百分比。

(2 分)

(d) 寫出中位數、上四分位數及第 30 個百分位數。

(2 分)

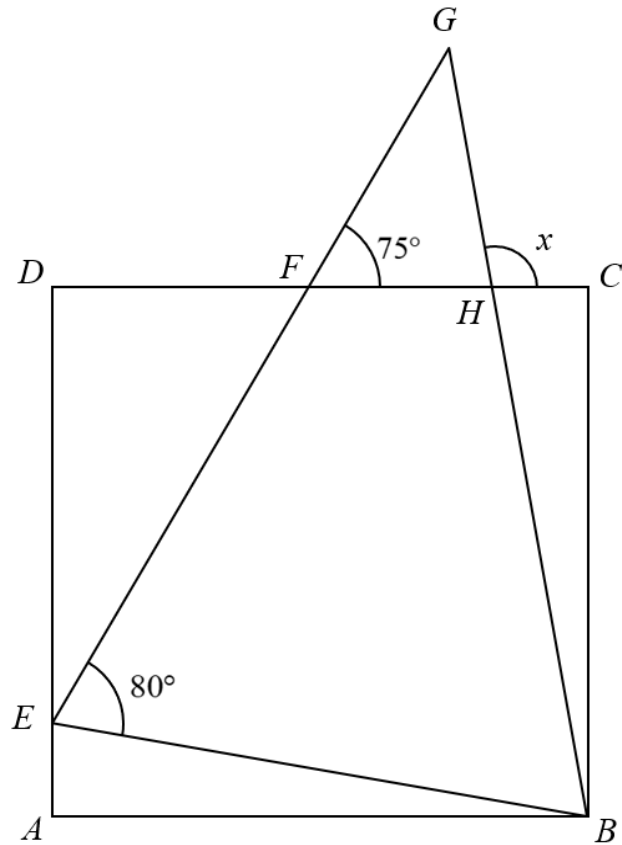
(e) 班中獲最高分的 15% 學生可得到禮物一份。求獲得禮物的學生的最低分數。

(1 分)

Lined paper template with horizontal ruling lines.

Lined paper template with horizontal ruling lines.

12. In the figure, $ABCD$ is a square. E is a point on AD . F and H are points on DC . It is given that $BG = EG$, $\angle BEG = 80^\circ$ and $\angle GFH = 75^\circ$.



- (a) Find x . (4 marks)
- (b) Prove that $EA = HC$. (4 marks)

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

Lined paper template with horizontal ruling lines.

Lined paper template with horizontal ruling lines.

Blank lined area for writing.

試 卷 完