

GeoGebra 工作坊

幾何板上的數學

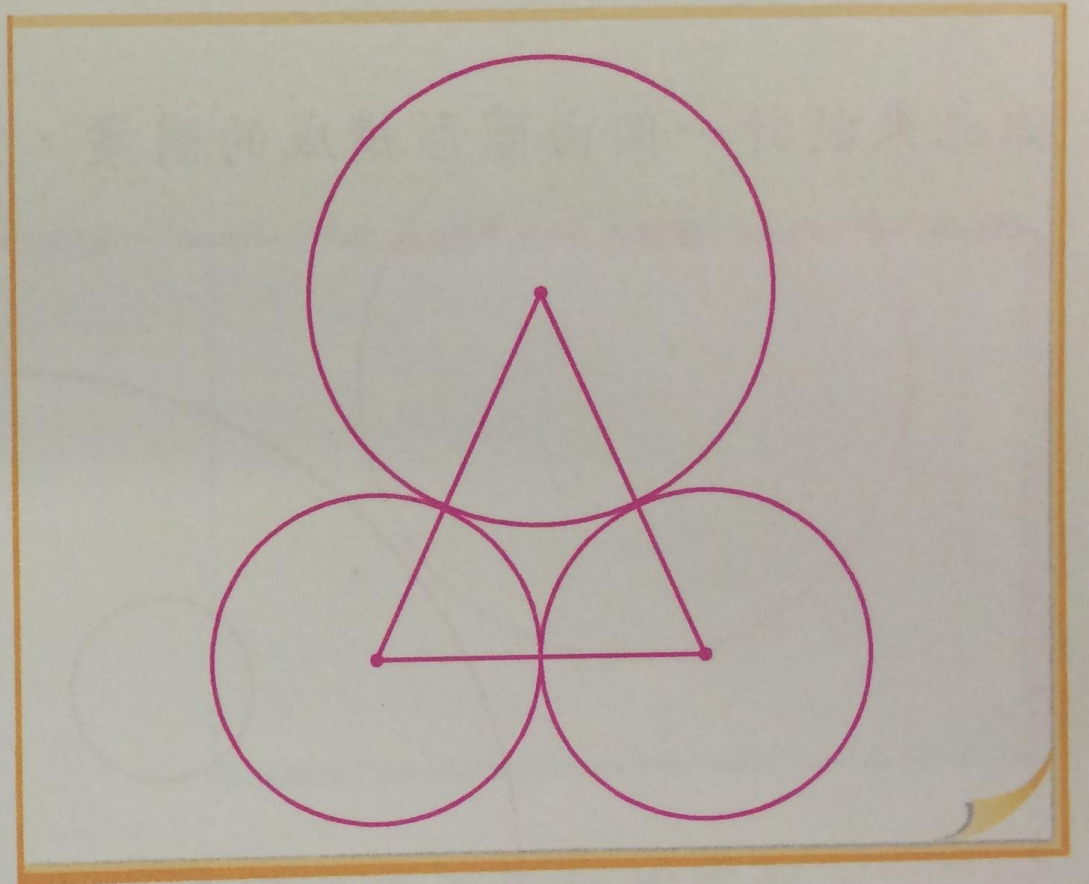
2020/05/05 SPKWAN

依指示，用圓規畫出圓形，並用顏色筆畫出所得的平面圖形。 答案僅供參考

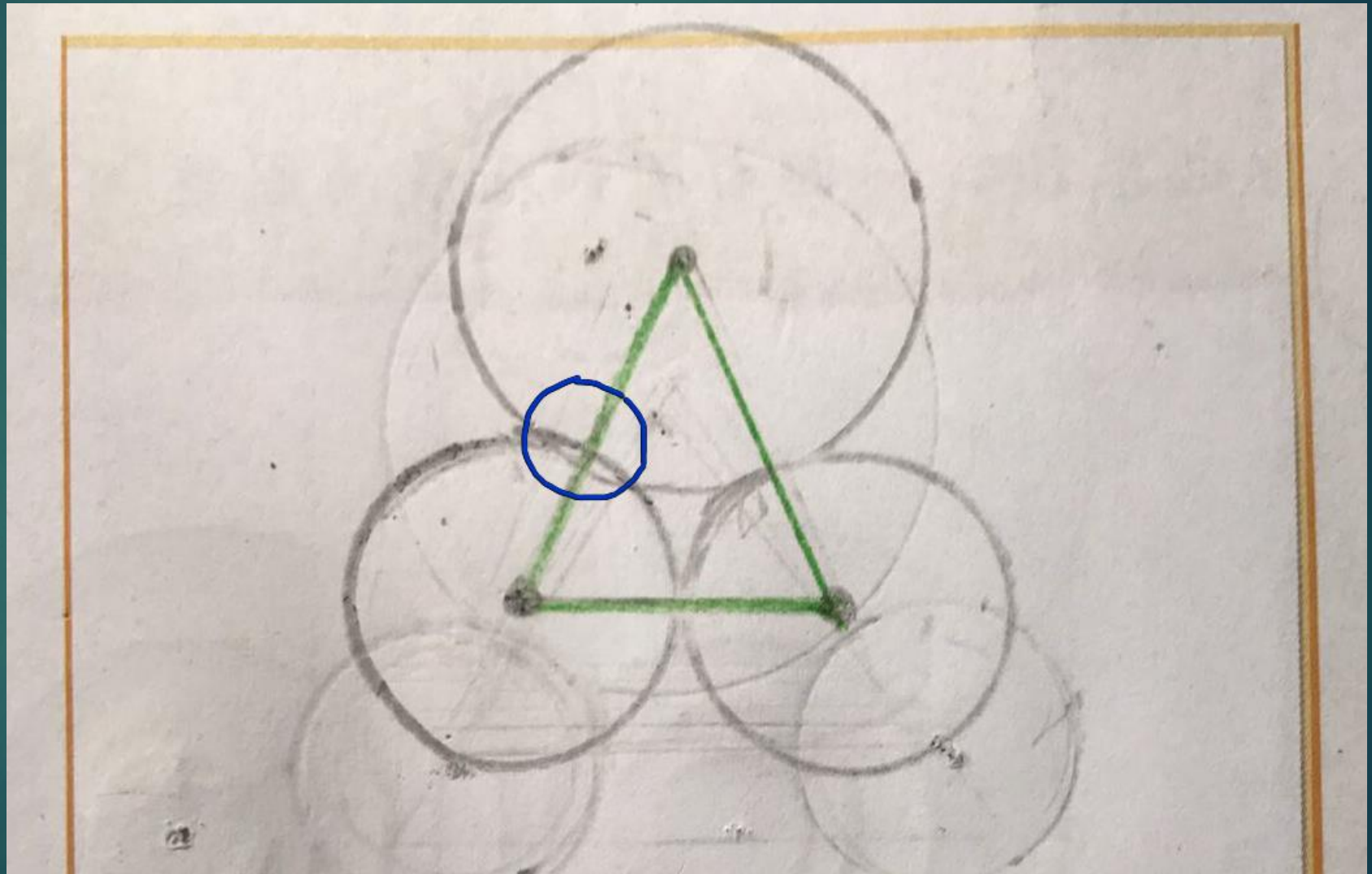
- ③ 先畫出一個大圓形和兩個大小相同的小圓形，然後把它們的圓心連起來，得出一個等腰三角形。



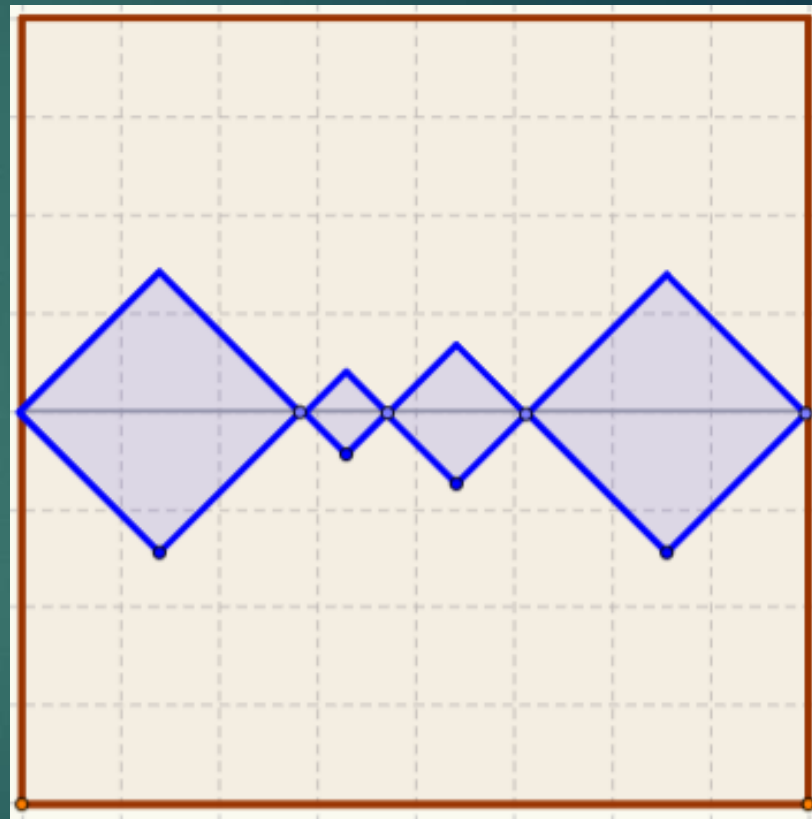
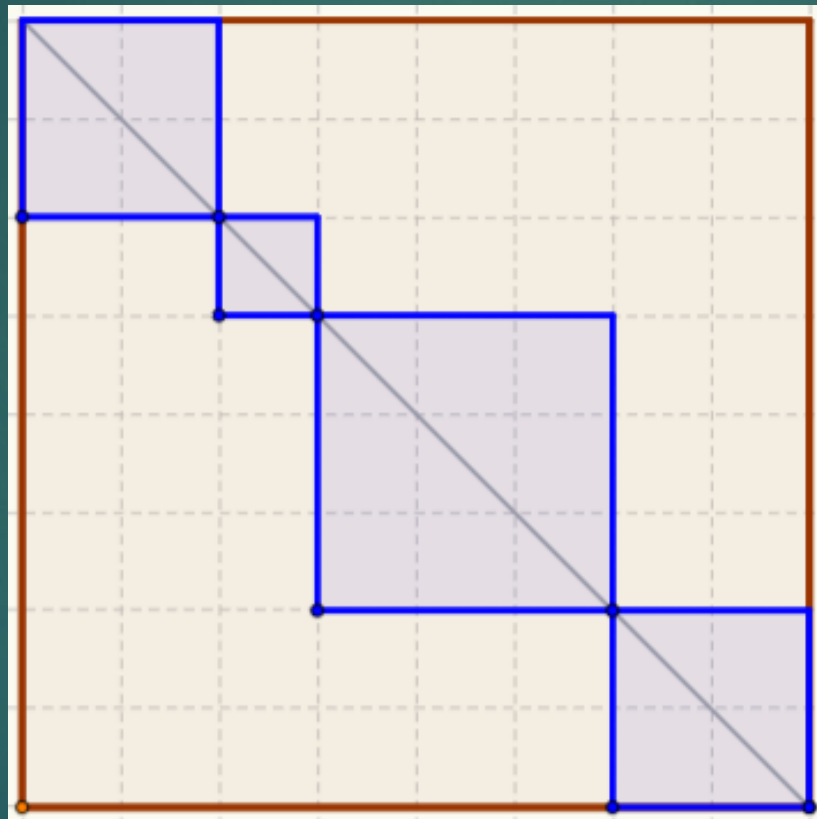
圓形與圓形之間
要互相緊貼。



互相緊貼的圓

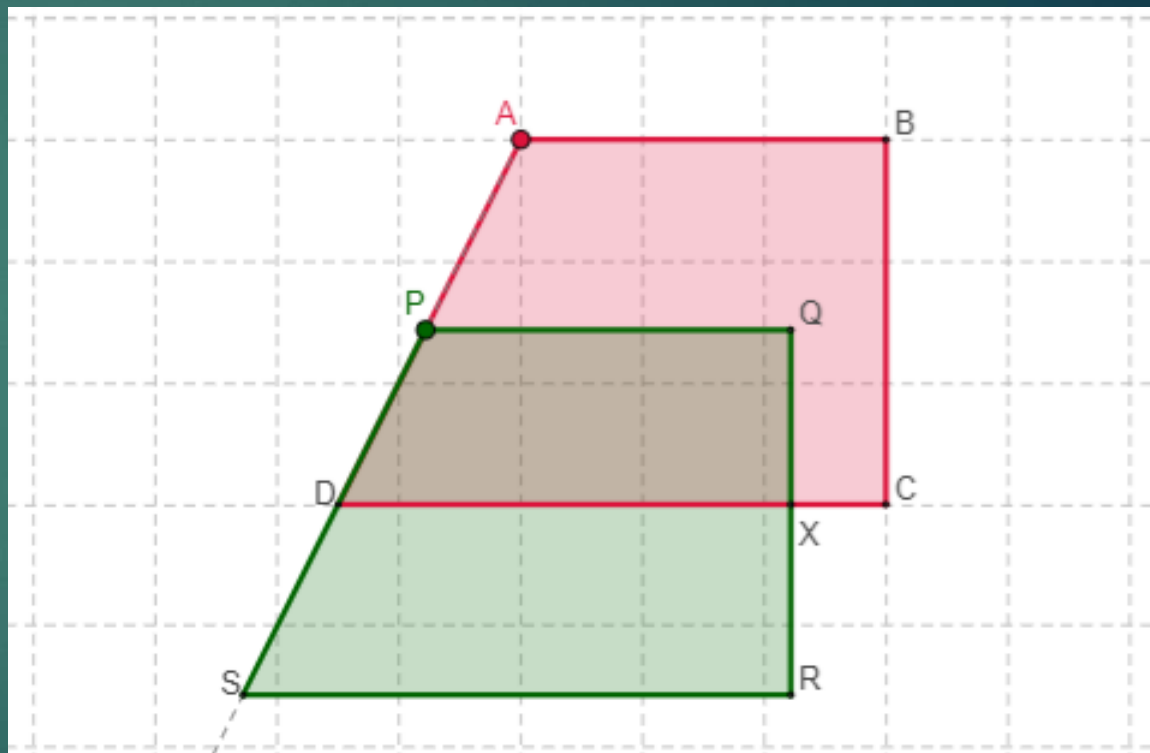


方內有方



考卷面積題

右圖由兩個大小相同的
梯形重疊而成，求
ABCXQP的面積。



考卷面積題

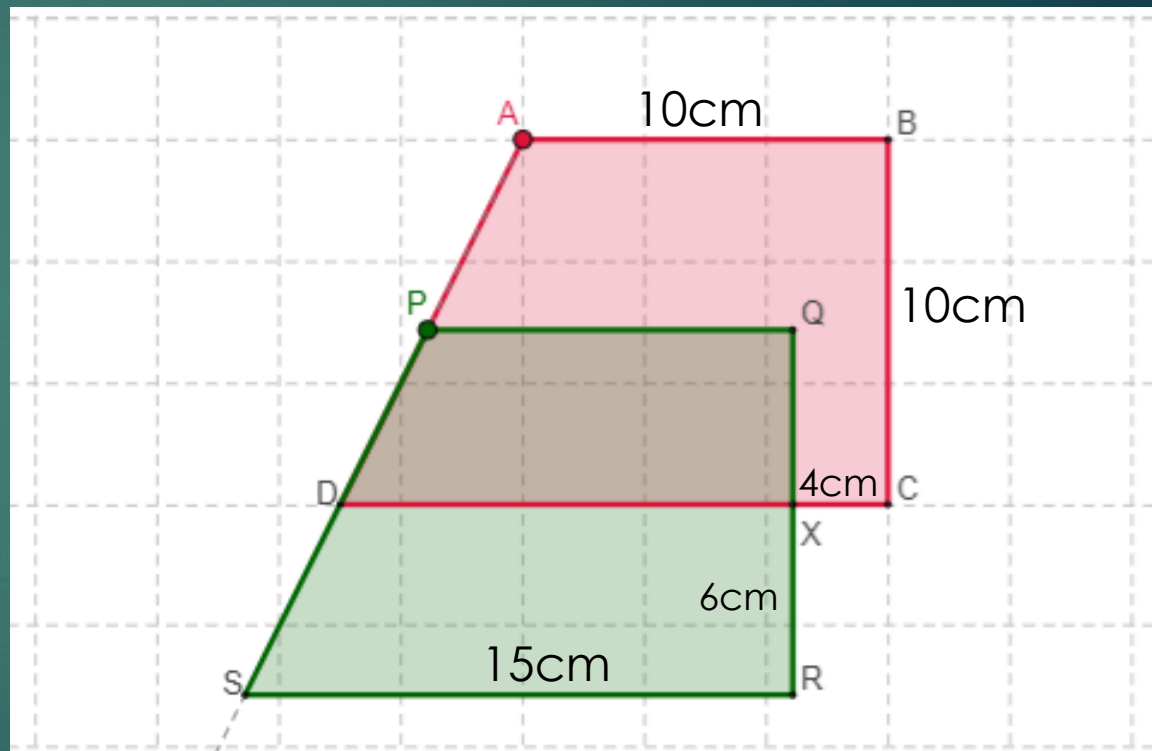
右圖由兩個大小相同的
梯形重疊而成，求
ABCXQP的面積。

Model Ans: 83cm^2

$$(10+15) \times 10 \div 2 - (10+11) \times 4 \div 2$$

$$= 125 - 42$$

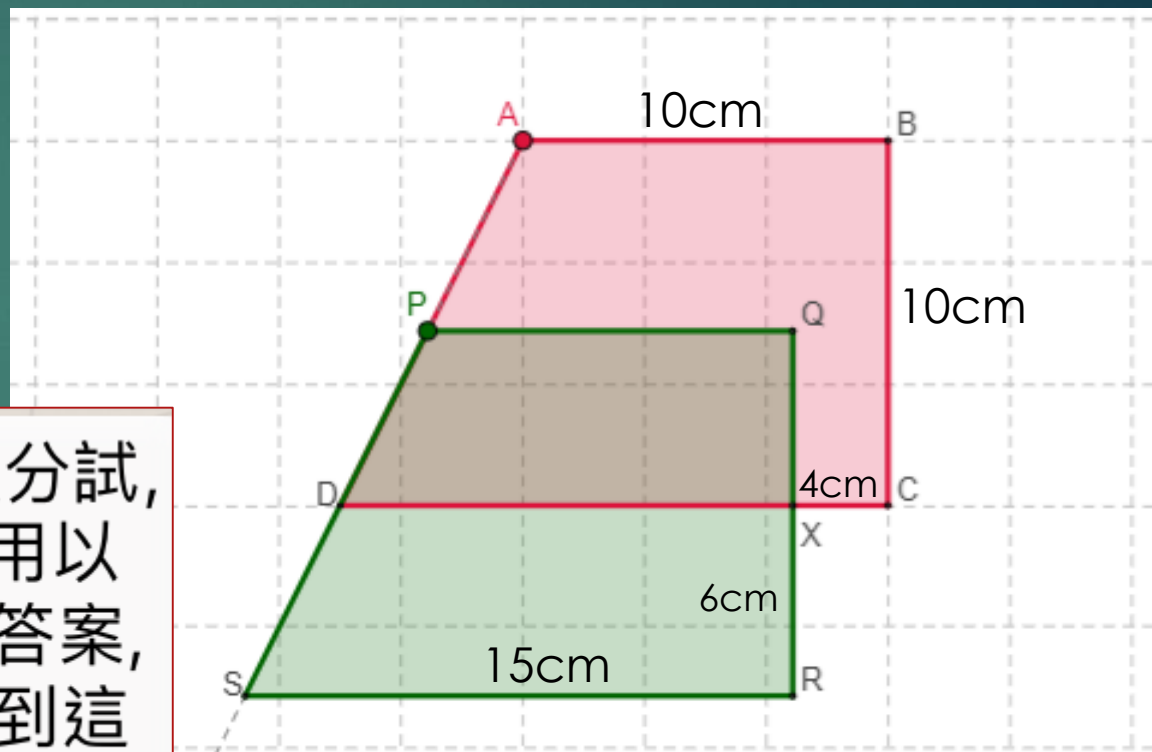
$$= 83 (\text{cm}^2)$$



考卷面積題

右圖由兩個大小相同的梯形重疊而成，求 $ABCXQP$ 的面積。

煩請大家討論一下,這份卷p5報分試,因為model answer 83,有學生用以上提供數據計算計到88及其他答案,最後校方決定除消這題目,真的到這地步?因為怕惹起家長好大回響。



考卷面積題

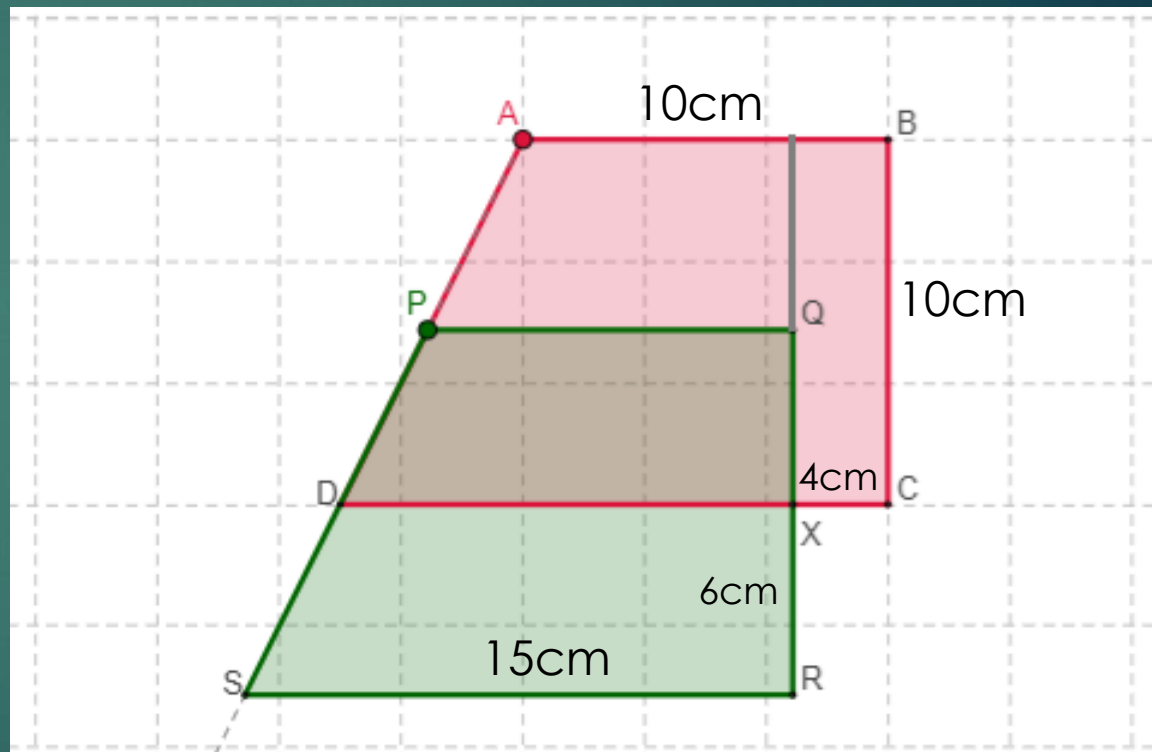
右圖由兩個大小相同的
梯形重疊而成，求
ABCXQP的面積。

Pupil's soln: 88cm^2

$$(6+10) \times 6 \div 2 + 10 \times 4$$

$$= 48 + 40$$

$$= 88 (\text{cm}^2)$$



考卷面積題

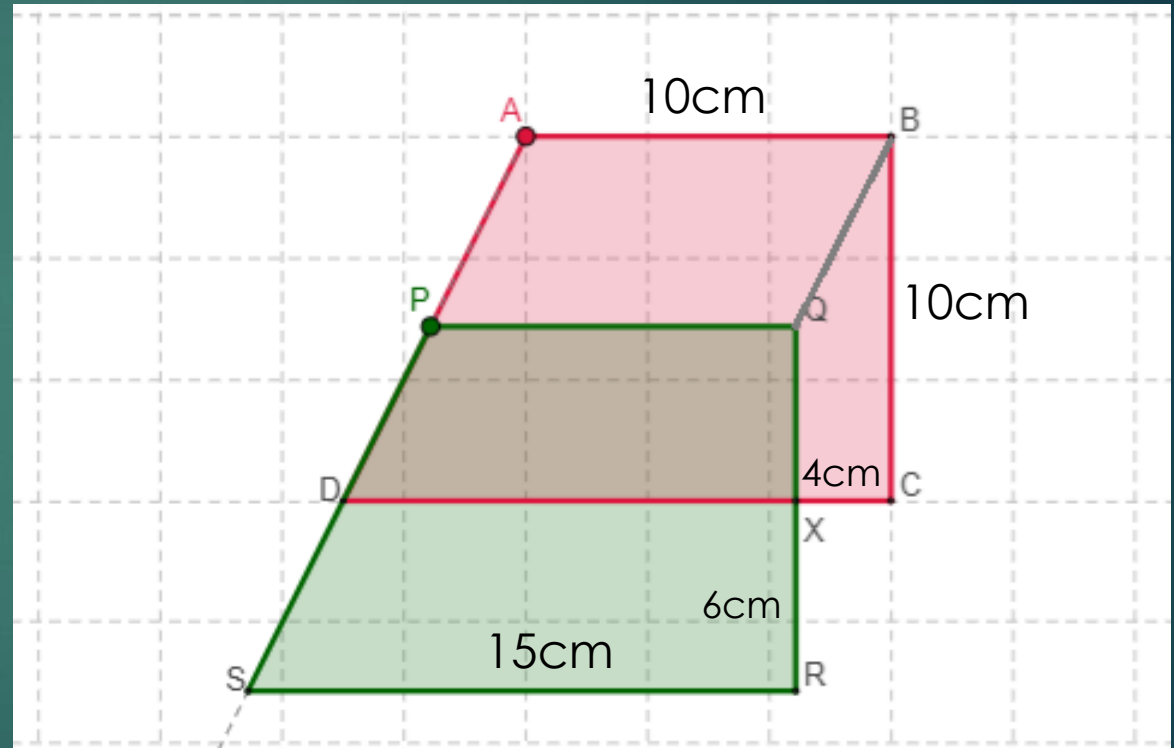
右圖由兩個大小相同的
梯形重疊而成，求
ABCXQP的面積。

Alternate soln:

$$10 \times 6 + (4+10) \times 4 \div 2$$

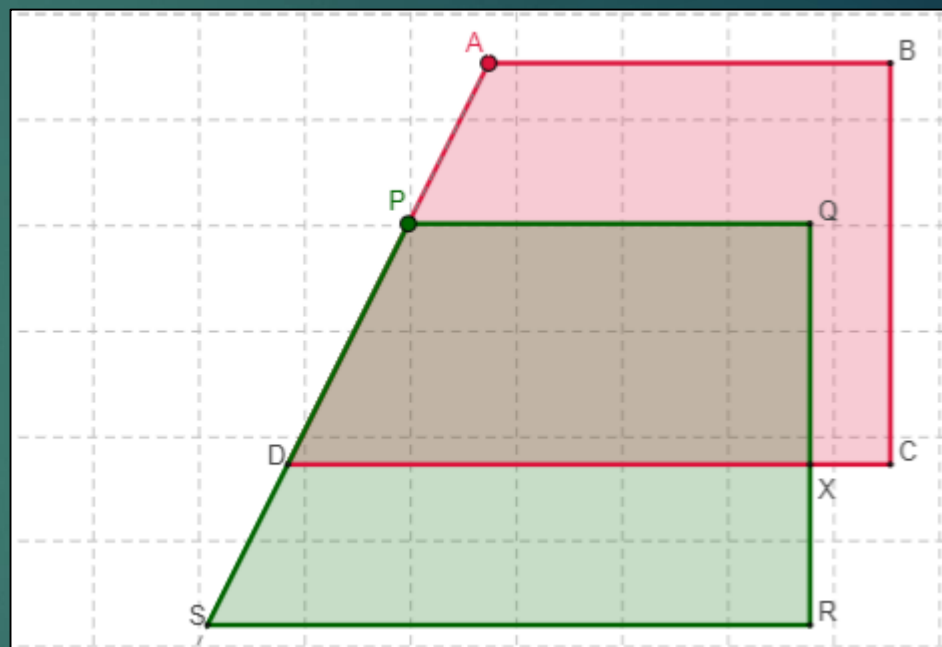
$$= 60 + 28$$

$$= 88 \text{ (cm}^2\text{)}$$



考卷面積題

Mandy, 欣賞擬題者的心思, 我想設計者是想用原梯形面積減去重疊小梯形面積(83)。但要留意兩個全等直角梯形重疊時的數據(即4cm及6cm)並非是任意的。若訂出4cm的話, 餘下的高是8cm。若餘下的高是6cm的話, 下底不重疊的部分長3cm才對。



本課討論內容安排

	內容		內容
1.	出入相補	2.	互相緊貼的圓
3.	方內有方	4.	考卷面積題
5.	GeoGebra CAS	6.	‘RandomBetween’
7.	‘Sequence’	8.	GeoGebra account
9.	GeoGebra Apps	10.	幾何板上的數學

Sequence Command ✂

Sequence(<Expression>, <Variable k>, <Start Value a>, <End Value b>)

Yields a list of objects created using the given expression and the index k that ranges from start value a to end value b .

Examples:

- `Sequence((2, k), k, 1, 5)` creates a list of points whose y -coordinates range from 1 to 5:
 $\{(2, 1), (2, 2), (2, 3), (2, 4), (2, 5)\}$
- `Sequence(x^k, k, 1, 10)` creates the list $\{x, x^2, x^3, x^4, x^5, x^6, x^7, x^8, x^9, x^{10}\}$

Sequence(<Expression>, <Variable k>, <Start Value a>, <End Value b>, <Increment>)

Yields a list of objects created using the given expression and the index k that ranges from start value a to end value b with given increment.

Examples:

- `Sequence((2, k), k, 1, 3, 0.5)` creates a list of points whose y -coordinates range from 1 to 3 with an increment of 0.5: $\{(2, 1), (2, 1.5), (2, 2), (2, 2.5), (2, 3)\}$
- `Sequence(x^k, k, 1, 10, 2)` creates the list $\{x, x^3, x^5, x^7, x^9\}$.

Note: Since the parameters a and b are dynamic you could use [slider](#) variables in both cases

Sequence

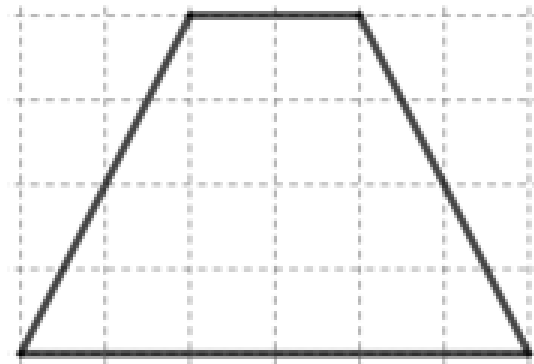
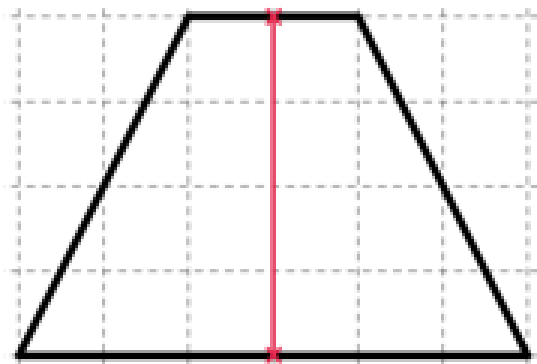
This article is about [GeoGebra command](#).

Command Categories ([All commands](#))

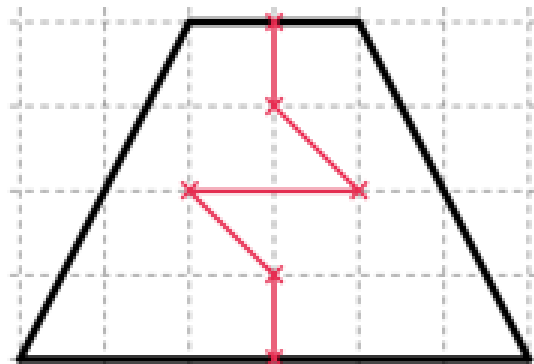
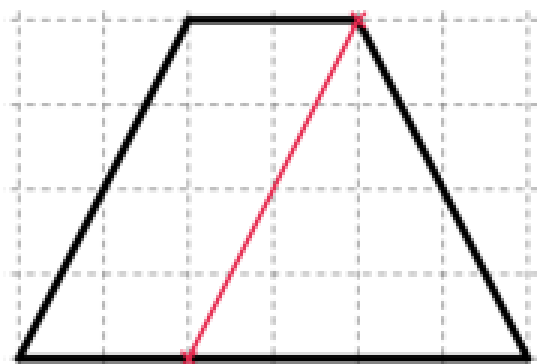
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- [Algebra Commands](#)
- [Chart Commands](#)
- [Conic Commands](#)
- [Discrete Math Commands](#)
- [Function Commands](#)
- [Geometry Commands](#)
- [GeoGebra Commands](#)
- [List Commands](#)
 - **Sequence**
 - [Append](#)
 - [Element](#)
 - [First, Last](#)
 - [Insert](#)

幾何板上的數學

1. 把下列各圖形分割成2個形狀和大小都相同的圖形，在圖中加畫直線表示。(可以用math learning center的free math app輔助)



2. 把下列各圖形分割成2個大小都相同的圖形，在圖中加畫直線表示。



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