

# GCSE Maths – Geometry and Measures

## Plans and Elevations

### Worksheet

NOTES



SOLUTIONS



This worksheet will show you how to work out different types of plans and elevations questions. Each section contains a **worked example**, a **question with hints** and then **questions for you to work through** on your own.

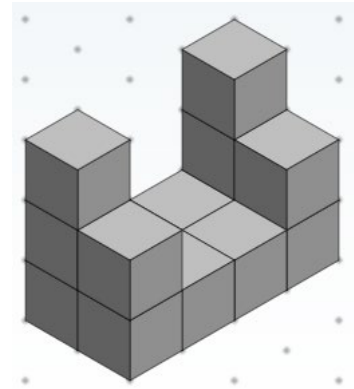
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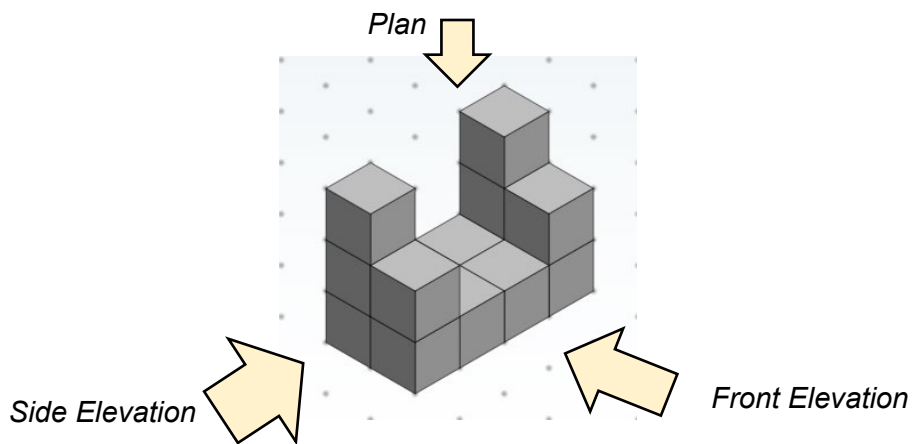
## Section A

### Worked Example

The diagram below shows a shape, with centimetre cubes. Draw the plan, side elevation and front elevation.



**Step 1:** Label the plan, side and front elevation.

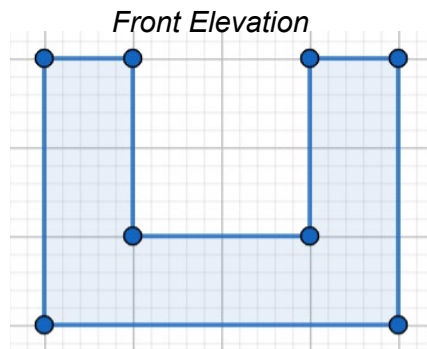
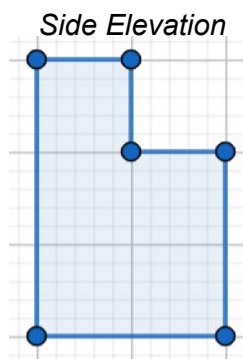


**Step 2:** Sketch the plan with the correct scale. Label the sketch with 'plan elevation'.

The plan is the bird's eye view and is a 4 cm by 2 cm rectangle.

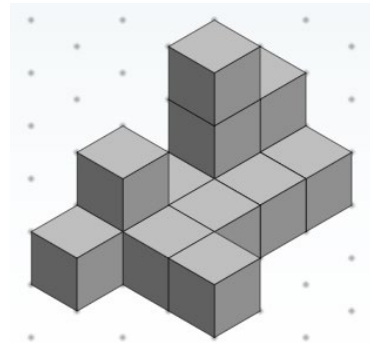


**Step 3:** Sketch the side and front elevation with the correct scale. Label each sketch.

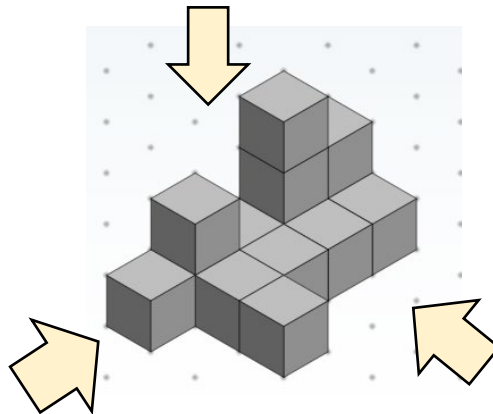


## Guided Example

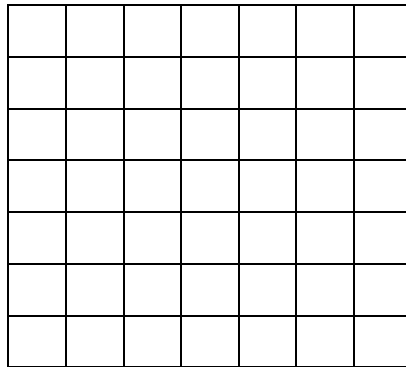
The diagram below shows a shape, with centimetre cubes. Draw the plan, side elevation and front elevation.



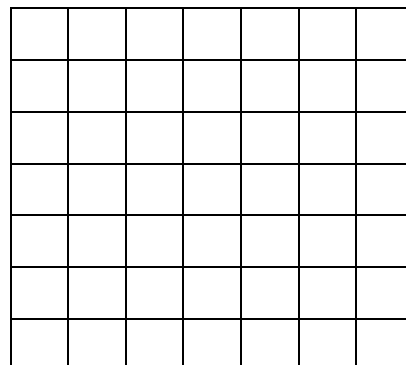
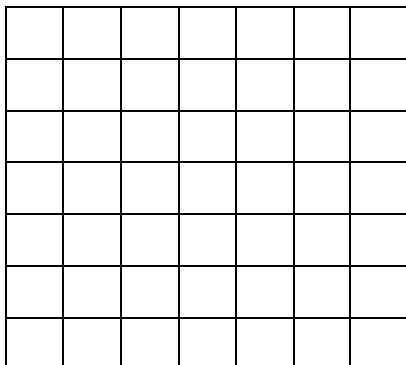
**Step 1:** Label the plan, side and front elevation.



**Step 2:** Sketch the plan with the correct scale. Label the sketch with 'plan elevation'.



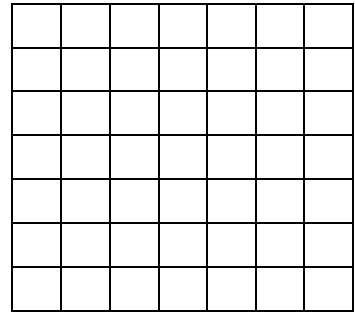
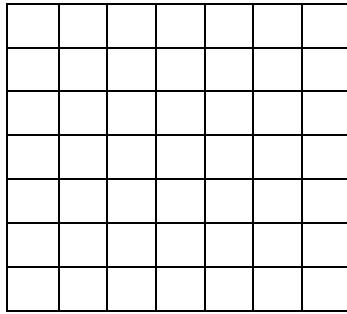
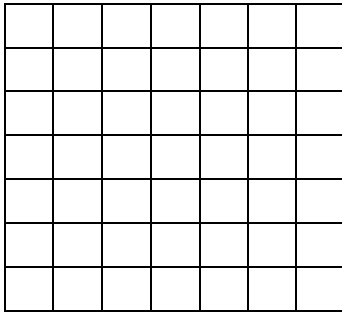
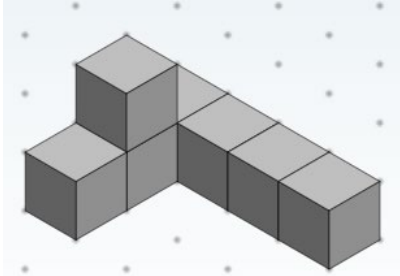
**Step 3:** Sketch the side and front elevation with the correct scale. Label each sketch.



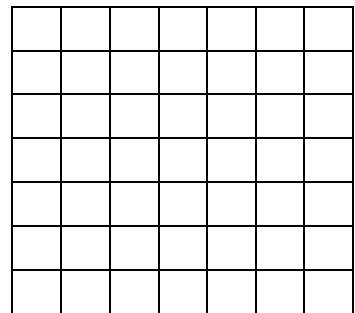
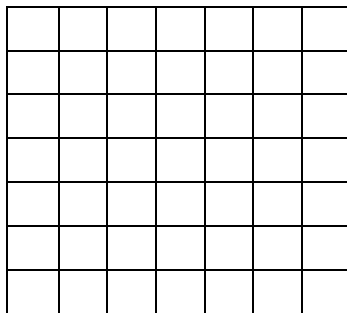
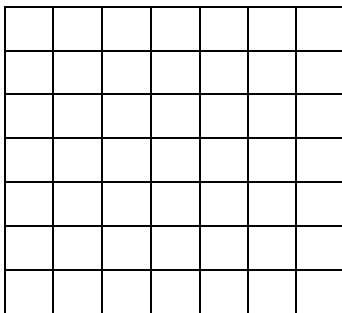
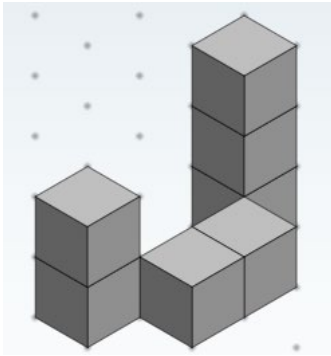
**Now it's your turn!**  
If you get stuck, look back at the worked and guided examples.

1. Draw a plan, side elevation and front elevation for each solid to the correct scale.

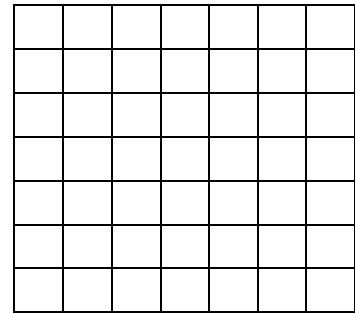
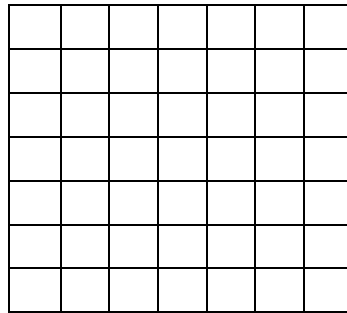
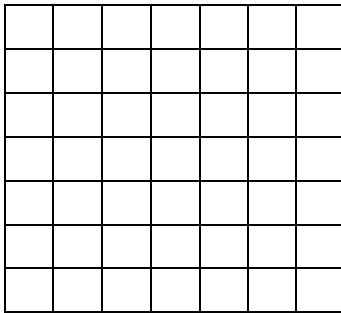
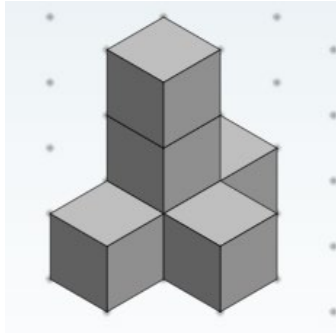
a)



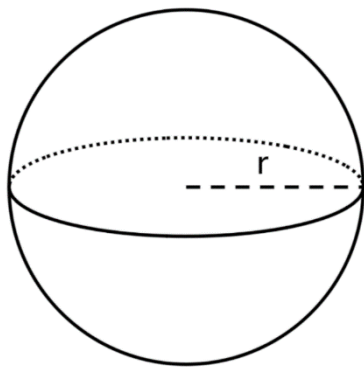
b)



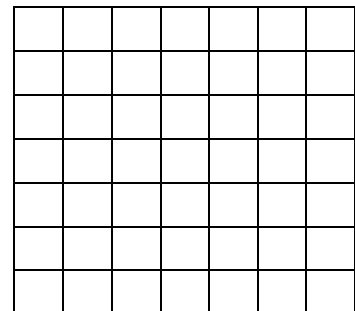
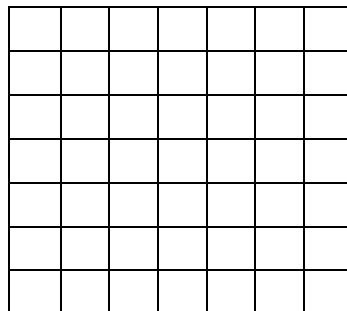
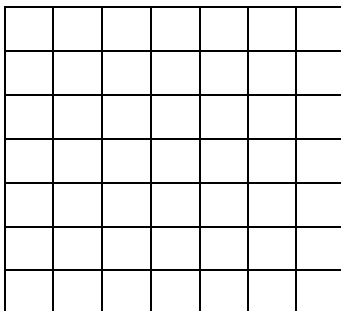
c)



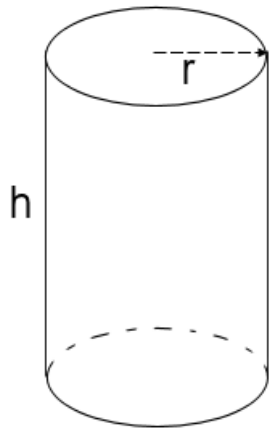
d)



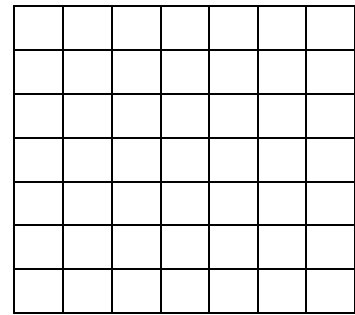
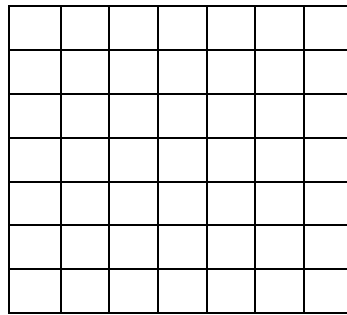
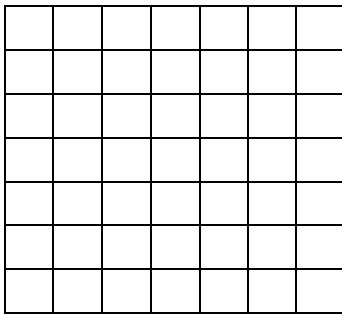
$$r = 2.5 \text{ cm}$$



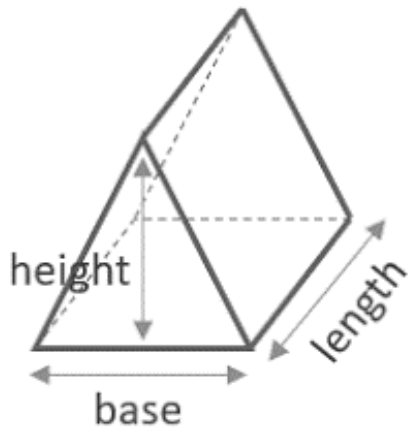
e)



$r = 2 \text{ cm}$  and  $h = 4 \text{ cm}$



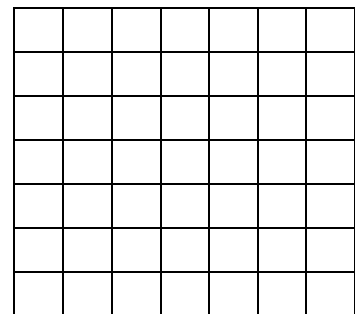
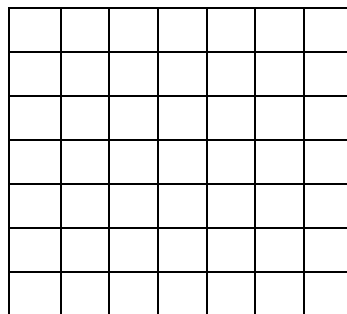
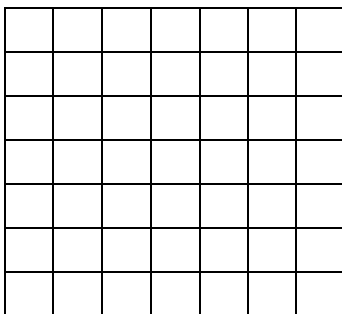
f)



$base = 6 \text{ cm}$

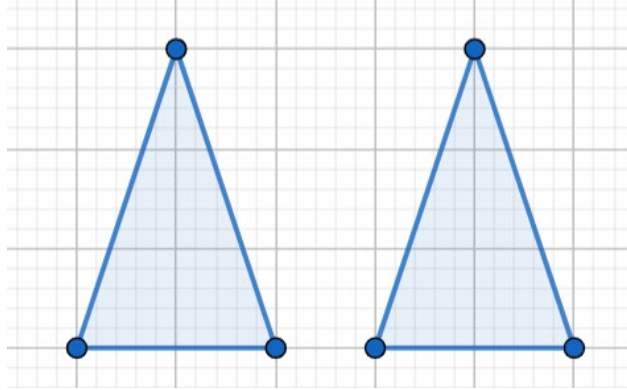
$height = 4 \text{ cm}$

$length = 5 \text{ cm}$



## Section B

Below shows the side and front elevation respectively. Draw the plan of the solid. Sketch the solid.



**Step 1:** Use the given elevations to measurements of the plan view.

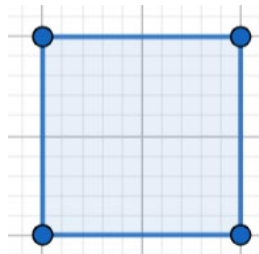
*The side elevation shows the width of the plan.*

Width of plan: 2 cm vertical

*The front elevation shows the length of the plan.*

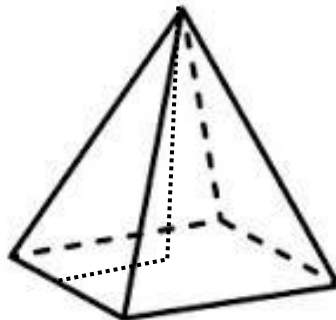
Length of plan: 2 cm horizontal

**Step 2:** Draw the plan view using the above information.



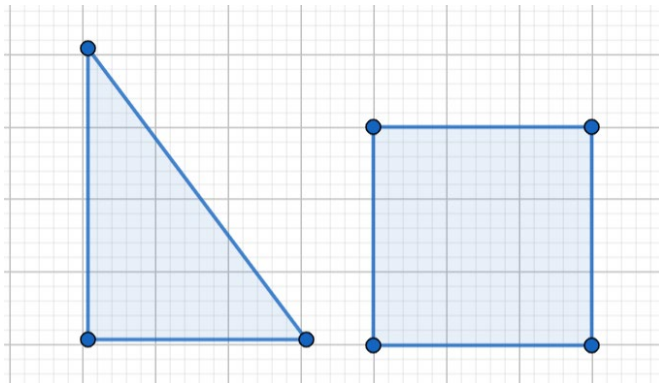
**Step 3:** Using the above information, sketch the solid.

*According to the plan and elevations, the solid is a square based pyramid with base 2 cm and height 3 cm.*



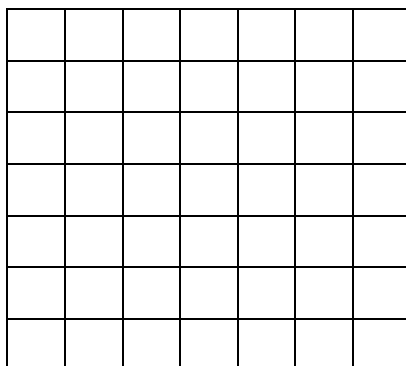
## Guided Example

Below shows the front elevation and plan respectively. Draw the side elevation of the solid. Sketch the solid.



**Step 1:** Use the given elevations to measurements of the side view.

**Step 2:** Draw the side view using the above information.



**Step 3:** Using the above information, sketch the solid.

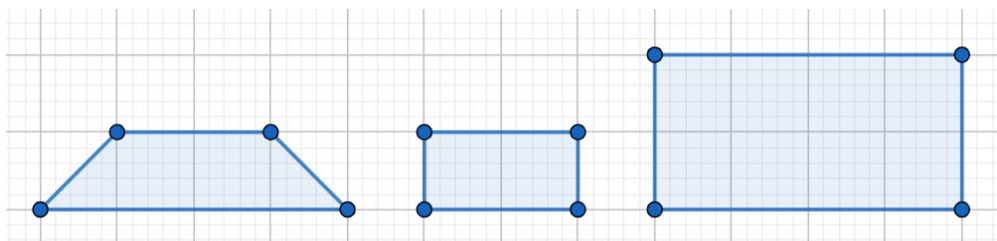




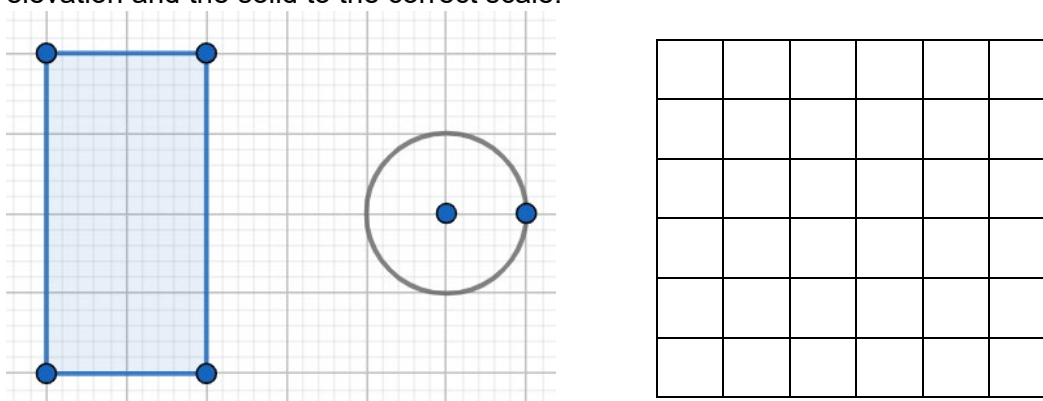
### Now it's your turn!

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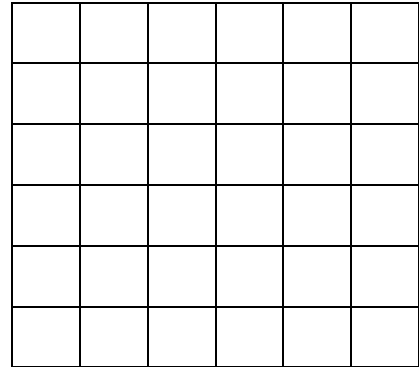
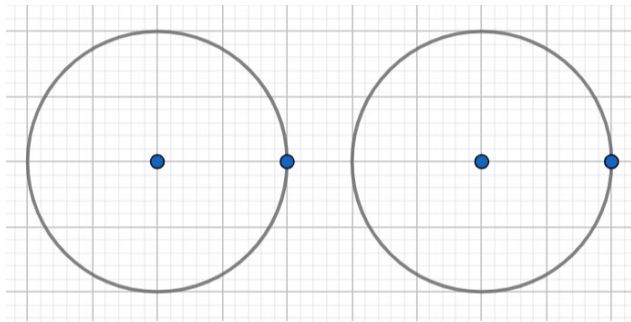
2. The image below shows the front and side elevation and plan respectively. Draw the solid to the correct scale.



3. The image below shows the front elevation and plan respectively. Draw the side elevation and the solid to the correct scale.



4. The image below shows the front and side elevation respectively. Draw the plan and solid to the correct scale.



5. The plan, side and front elevation are all triangles. What shape is the solid?

