

Drawing nets of 3D objects

- Some 3D shapes can be opened up to create a flat shape. At level 1, learners would need to be able to do this for cuboids.



- Learners also need to be aware of both accuracy and scale in their drawings. If the question asks for accuracy, then the learners will need to draw it life size. This might mean using more than one square on their grid.
- If the question uses scale, the learners should work out the length of the edges in advance.
- Learners should always use a ruler.

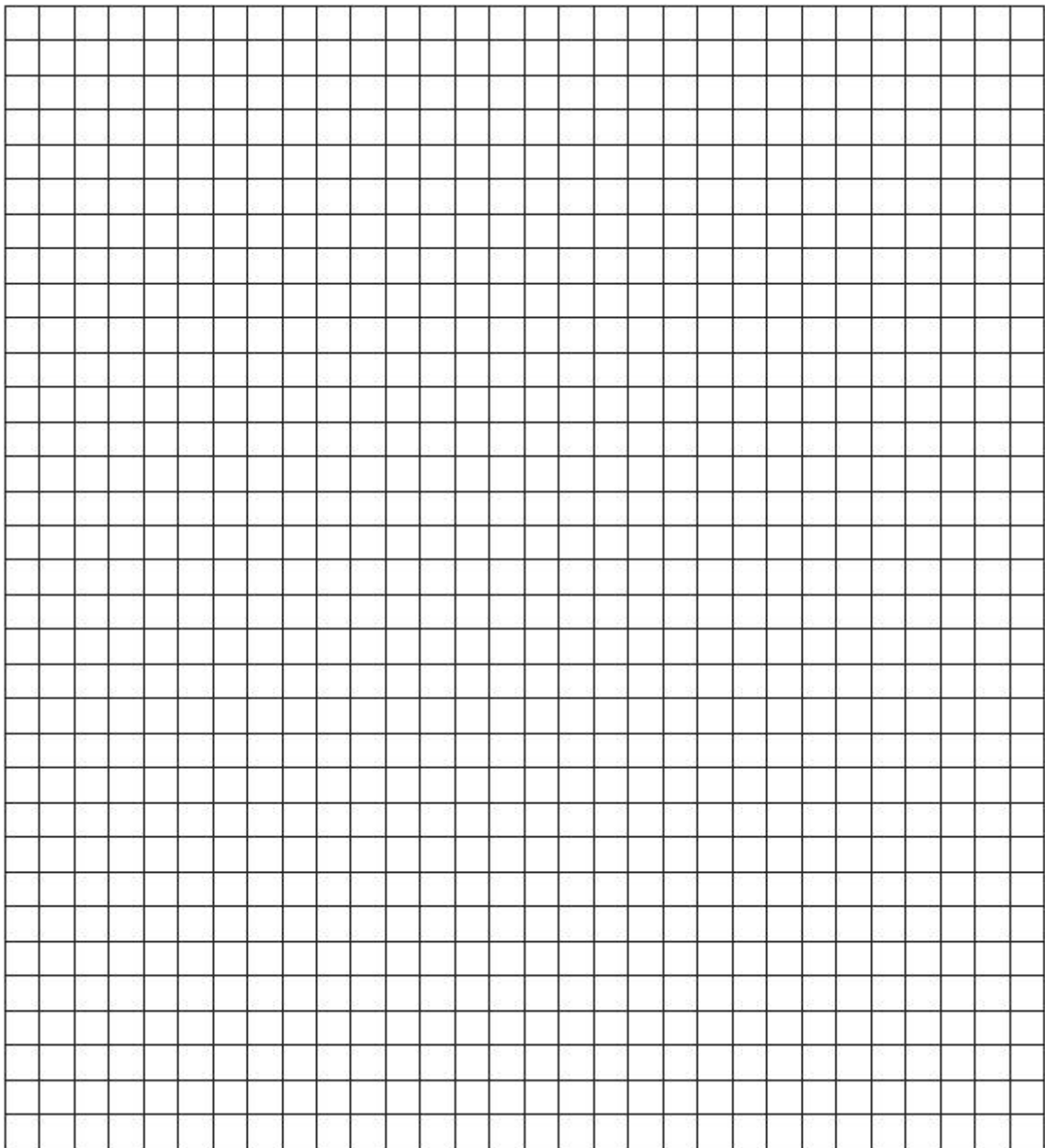
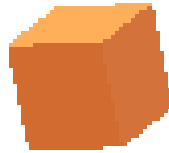
What the Pearson says

- Centres should ensure learners practise scale drawings using squared paper with a variety of different sized squares, not just 1cm square paper.
- They need to ensure that learners know what a net is, possibly by opening out a variety of boxes into a flat shape so that the net is easily seen.

Handout 1

Nets of a cube

In total there are 11 different ways of drawing a net of a cube, how many can you draw?



Try cutting out the shapes and seeing if you can create a cube to check if you are correct.

Handout 2

In the assessment you might be asked to draw a net just like you did in handout 1. However, you need to be able to understand the question and be aware of the scale you are using too.

Let's have a look at a question:

Tina collects rare coins.

Tina wants to design a closing silver box for her coin.

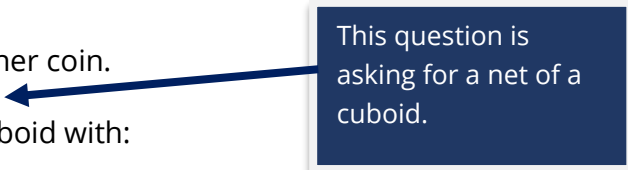
She wants the box to be in the shape of a cuboid with:

square base of side length 5 cm


height of 1.5 cm.

Tina needs to draw an accurate net of the box for a jeweller.

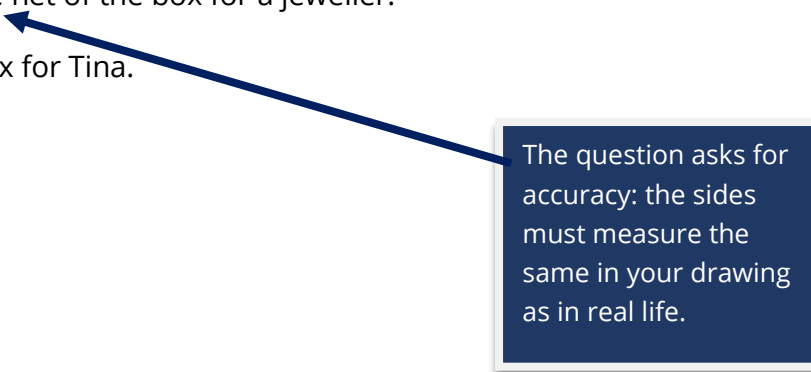
Draw an accurate net of the box for Tina.



This question is asking for a net of a cuboid.



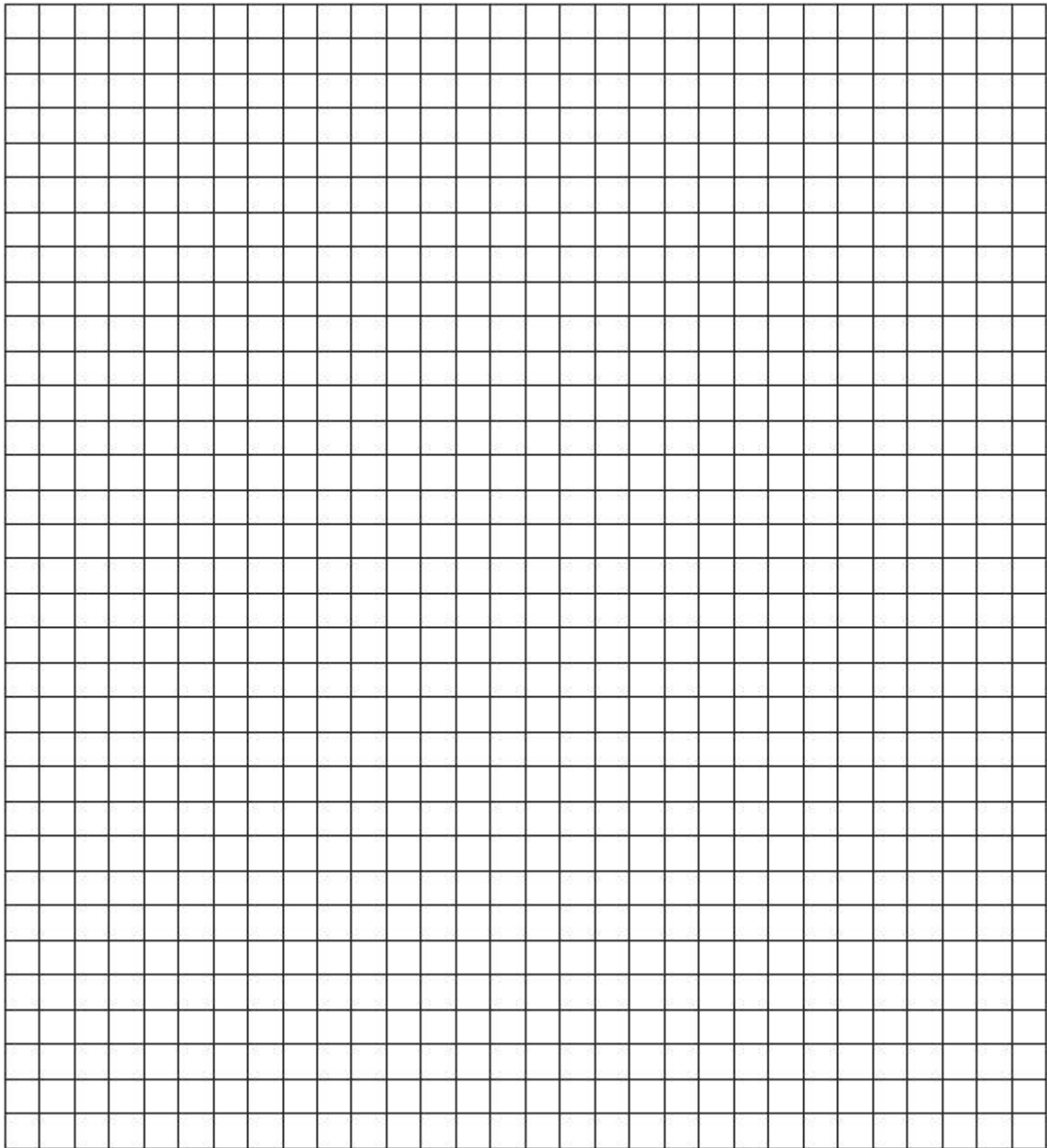
Here we have the measurements.



The question asks for accuracy: the sides must measure the same in your drawing as in real life.

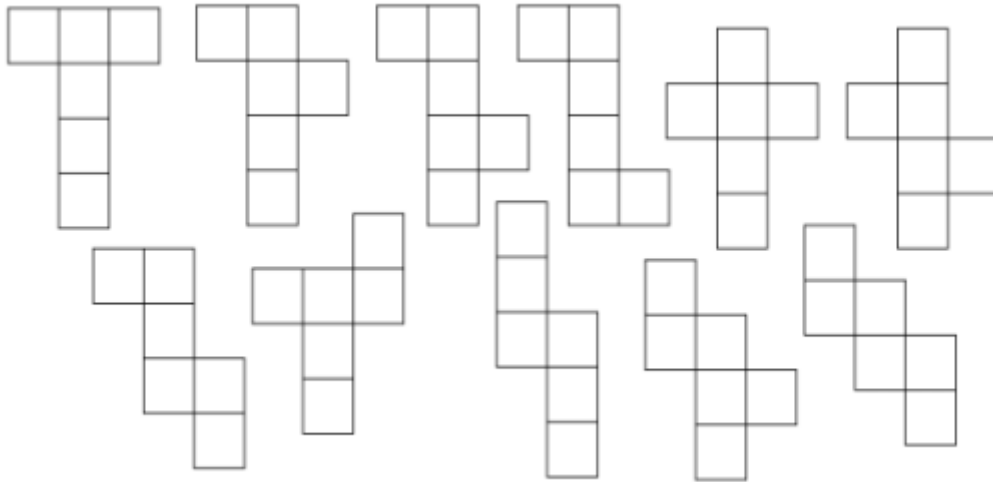
Now use the grid below to draw the net from the question above:

(3 marks)



Handout 1 answers

These are the 11 possible nets:



Handout 2 answers

Mark Scheme

Question	Skills Standard	Process	Mark	Mark Grid	Evidence
	R1	Begins to work with scale	1 or	K	Draws at least 1 square with side length of 5 cm (10 sqs) or 1 rectangle 5 cm (10 sqs) by 1.5 cm (3 sqs) OR Draws a net of a cuboid (of any size)
	I6	Develops solution	2 or	KL	Draws a net of a cuboid 5 cm by 5 cm by 1.5 cm with one square or rectangle missing or incorrect
	I6	Correct drawing of the net	3	KLM	Correct and accurate net of the cuboid L: 5 cm, W: 5 cm, H: 1.5 cm
Total marks for question			3		

