

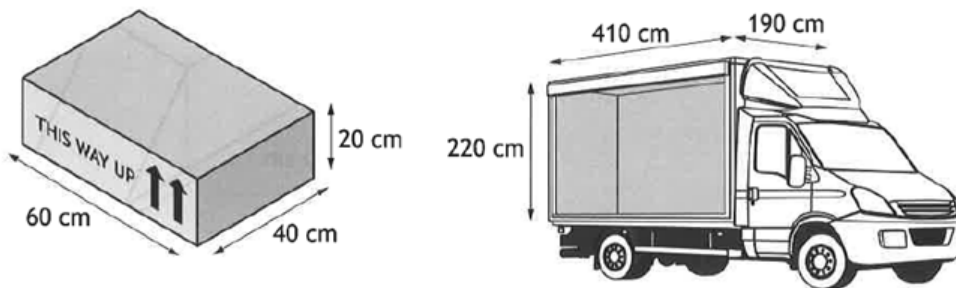
## SQA Past paper questions

## 2024 - Paper 1 - Question 8

Tabitha is a van driver for a supermarket that provides home deliveries.

Orders are packed into boxes for home delivery to customers.

The dimensions of each box and the internal dimensions of the van are shown in the diagrams.



All boxes must be aligned in the same direction.

Calculate the maximum number of boxes that will fit in the van. 3

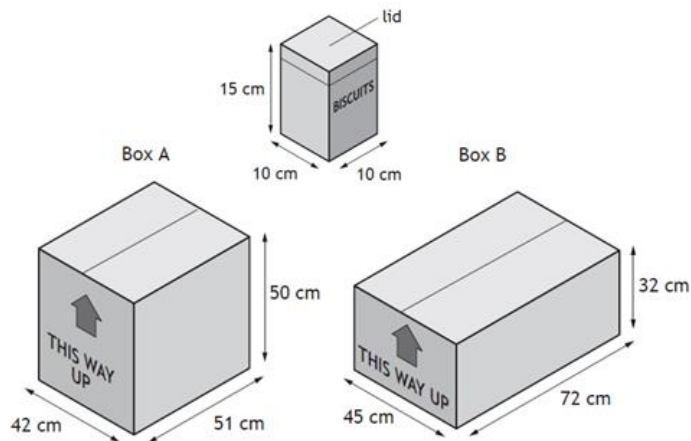
Click [here](#) for video solution. 

## 2023 - Paper 1 - Question 7

Biscuits are sold in tins in the shape of a cuboid as shown.

The tins need to be packed into boxes with the lid facing upwards.

There are two types of box available with internal measurements as shown.



Determine the maximum number of tins which can be packed.

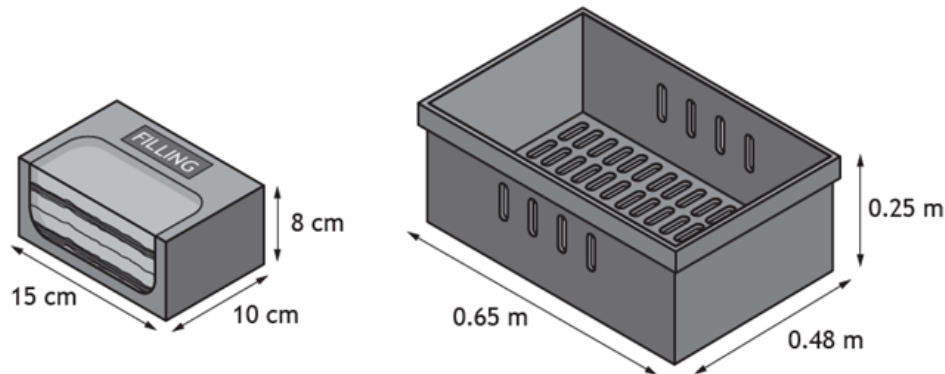
Use your working to justify your answer. 2

Click [here](#) for video solution. 

## 2022 - Paper 2 - Question 4(a)

A company produces sandwiches and packs them in crates for transporting to shops.

The dimensions of each sandwich box and the internal dimensions of a crate are shown in the diagrams. The filling label is placed on the top.



The sandwich boxes need to be laid with the filling label facing upwards. They must all be aligned in the same direction.

Calculate the maximum number of sandwich boxes that can be fitted into each crate.

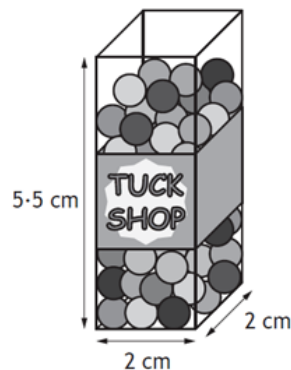
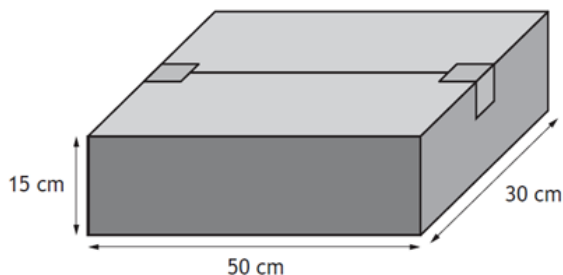
3

Click [here](#) for video solution. 

## 2021 - Paper 2 - Question 9(c)

The packets are in the shape of a cuboid with external dimensions as shown.

For delivery, the packets of sweets are packed into a box with internal dimensions as shown.



All the packets must be aligned in the same direction.

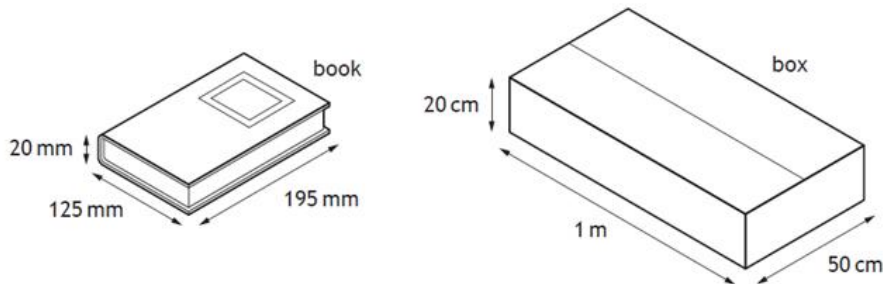
Calculate the maximum number of packets that can fit in the box. 3

Click [here](#) for video solution. 

## 2019 - Paper 2 - Question 9(c)

The books are to be packed in boxes for transporting to the bookshops.

The dimensions of the book and the internal dimensions of the box are shown in the diagrams.



The books need to be laid with the front cover facing upwards in the boxes.

They must all be aligned in the same direction.

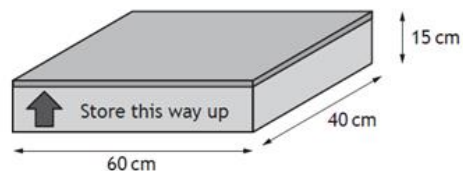
Calculate the maximum number of books that can be packed into each box.    3

Click [here](#) for video solution. 

## 2018 - Paper 2 - Question 9(c)

Tins are packed in boxes.

Each box has dimensions  $60\text{ cm} \times 40\text{ cm} \times 15\text{ cm}$  as shown below.



The boxes must be packed into containers for shipping to Canada.

The container has the internal dimensions shown below.



All the boxes must be aligned in the same direction.

Calculate the maximum number of boxes that will fit in the container.    3

Click [here](#) for video solution. 

## 2017 - Paper 2 - Question 6(a)

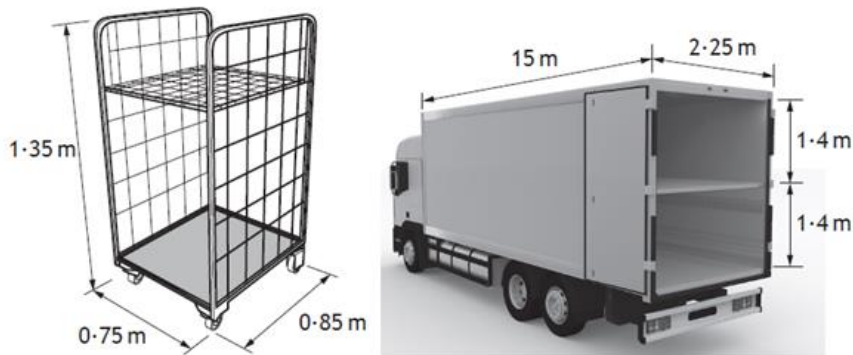
Russell is a lorry driver for a mail delivery company.

The mail is packed into cages which are then loaded on to the lorry.

His lorry has two levels for fitting cages.

Each cage has wheels on the bottom and must always be loaded upright.

The dimensions of the cage and the internal dimensions of the back of the lorry are shown in the diagrams.



What is the maximum number of cages that can be loaded into the back of the lorry?

3

Click [here](#) for video solution. 