

Bounds

Question Paper

Level	OCR
Subject	Maths
Exam Board	GCSE (9-1)
Topic	Fractions, Decimals and Percentages
Sub Topic	Bounds
Grade Level	Grade 7
Booklet	Question Paper

Time Allowed: 36 minutes

Score: /30

Percentage: /100

- 1** A sack of coffee weighs 25 kg, correct to the nearest kg.
The coffee is used to fill bags that hold 500g, correct to the nearest 10g.

Work out the largest number of bags that could be filled from the sack of coffee.

[4]

2 A lift can safely take a total weight of 600 kg, correct to the nearest 10 kg.

Can you be certain that eight people, each of weight 75 kg correct to the nearest kg, can safely travel in the lift?

Show how you decide.

[3]

3 The distance from the Earth to the Moon varies as they move in their orbits.

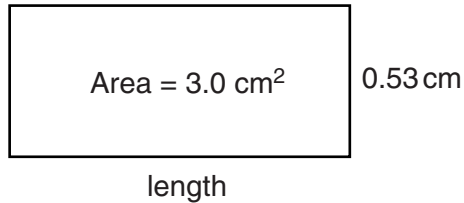
The largest distance is 406 700 km correct to the nearest 100 km.

The smallest distance is 356 400 km correct to the nearest 100 km.

Calculate the largest possible difference between these two measurements.

..... km **[3]**

- 4 Martha and Sukh are doing a task on area.
They have a rectangle with the information shown.



Not to scale

Martha works out the length and writes down her answer as 0.566 cm.
Sukh says she must be wrong.

- (a) Complete Sukh's explanation.

0.566 is clearly the wrong size.
I know the answer should be close to 6 because _____
_____ [1]

- (b) Sukh's calculator gives the answer as



Martha now rounds this answer to 4 decimal places.

- (i) Round 5.660377358 correct to 4 decimal places.

(b)(i) _____ [1]

Sukh says that 4 decimal places is not to an appropriate degree of accuracy.

- (ii) To what degree of accuracy should the answer be given?

(ii) _____ [1]

- (iii) Use your answer to part (ii) to write the length to an appropriate degree of accuracy.

(iii) _____ cm [1]

5 Emma and Rebecca are going on holiday.
They are each allowed 21 kg of luggage on the flight.

(a) After packing her suitcase, Rebecca weighs it on her bathroom scales.
The scales show a weight of 42 lb (pounds).

Is the suitcase within the allowed weight limit?
Show clearly how you decide.

[2]

(b) Emma's suitcase weighs 40 lb, correct to the nearest pound.

Write down the upper and lower bound of this weight.

(b) Upper bound _____ lb

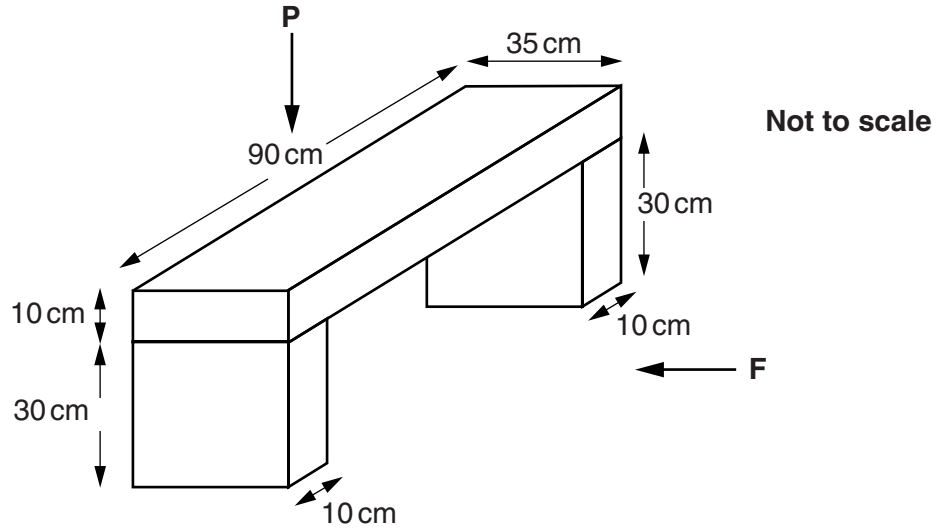
Lower bound _____ lb [2]

(c) At the airport, 17 suitcases are each weighed as 21 kg, correct to the nearest kg.

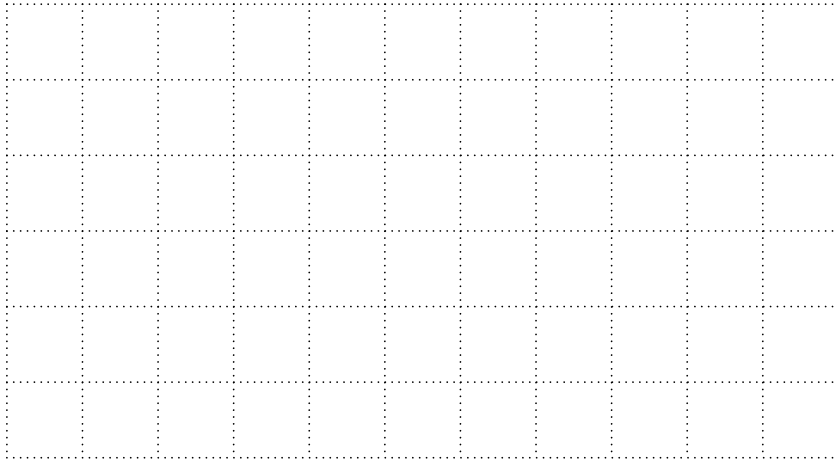
What is the largest possible total weight of these 17 suitcases?

(c) _____ kg [2]

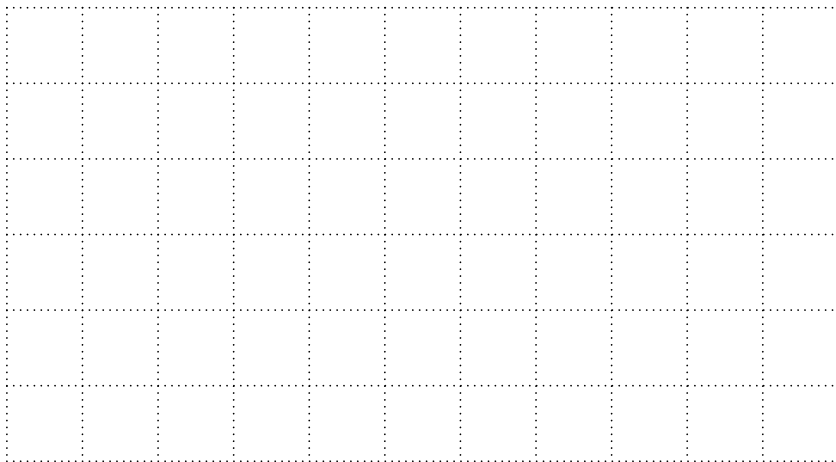
6 This garden bench is made from three cuboids.



(a) On the grids, draw the front elevation (view from F) and the plan (view from P). Use a scale of 1 cm to represent 10 cm.



Front elevation



Plan

- (b)** Work out the total volume of the garden bench.
Give the units of your answer.

(b) _____ [4]

- (c)** The weight of the bench is 75 kg, correct to the nearest kilogram.

What are the upper and lower bounds of this weight?

(c) Upper bound _____ kg

Lower bound _____ kg [2]