

1 [2025-M/J-22-22]

Zara cycles a distance of 500 metres, correct to the nearest 5 metres.
This takes 24.7 seconds, correct to the nearest 0.1 seconds.

Calculate the lower bound of her average speed.

..... m/s [3]

2 [2025-M/J-21-23]

The width of a rectangle is 5.4 cm, correct to the nearest 0.1 cm.

(a) Write down the upper bound of the width of the rectangle.

..... cm [1]

(b) The perimeter of the rectangle is 26.4 cm, correct to the nearest 0.1 cm.

Calculate the lower bound of the length of the rectangle.

..... cm [2]

3 [2024-M/J-19-12]

- (a) The mass of a bag of almonds is 125 g, correct to the nearest gram.

Write down the lower bound of the mass of the bag of almonds.

..... g [1]

- (b) The mass of a large box is 500 g, correct to the nearest 10 grams.
The mass of a small box is 250 g, correct to the nearest 10 grams.

Calculate the upper bound of the difference between the mass of a large box and the mass of a small box.

..... g [2]

4 [2024-M/J-5b-21]

- (b) The maximum mass a van can carry is exactly 770 kg.
The van carries boxes each of mass 4 kg, correct to the nearest kilogram.

Find the upper bound for the number of boxes this van can carry.

..... [2]

5 [2023-M/J-6c-22]

- (c) Sophia cycles a distance of 3000 m correct to the nearest 10 metres.
She cycles this distance in a time of 450 seconds correct to the nearest 10 seconds.

Calculate the upper bound for her average cycling speed in metres per second.

..... m/s [3]

6 [2022-M/J-4b-12]

- (b) Luke's thermometer measures the temperature correct to the nearest degree.
At midnight, the thermometer measures the temperature outside as -6°C .

Find the upper bound of the temperature outside at midnight.

..... $^{\circ}\text{C}$ [1]

7 [2022-M/J-3c-21]

- (c) The upper bound for the area of a rectangular piece of fabric is 8.8125 m^2 .
The width of the piece of fabric is 2.3 metres, correct to the nearest 0.1 m.
The length of the piece of fabric is d metres, correct to the nearest 0.1 m.

Find the value of d .

$d =$ [3]

8 [2022-M/J-7b-22]

- (b)** A car travels 352 km, correct to the nearest kilometre.
The time taken to travel this distance is 4.2 hours, correct to the nearest 0.1 hour.

Calculate the upper bound for the average speed of the car.

..... km/h [3]

9 [2021-M/J-14-12]

- (a)** The length of a path is measured as 62 m, correct to the nearest metre.

Write down the upper bound for the length of the path.

..... m [1]

- (b)** The mass of a bag of peanuts is 80 g, correct to the nearest 10 grams.

Calculate the lower bound for the mass of 5 of these bags of peanuts.

..... g [2]