

Bounds

Difficulty: Hard

Question Paper 2

Level	IGCSE
Subject	Maths (0580/0980)
Exam Board	CIE
Topic	Number
Sub-Topic	Bounds
Paper	Paper 2
Difficulty	Hard
Booklet	Question Paper 2

Time allowed: 35 minutes

Score: /27

Percentage: /100

Grade Boundaries:

CIE IGCSE Maths (0580)

A*	A	B	C	D	E
>88%	76%	63%	51%	40%	30%

CIE IGCSE Maths (0980)

9	8	7	6	5	4	3
>94%	85%	77%	67%	57%	47%	35%

Question 1

Joe measures the side of a square correct to 1 decimal place.

He calculates the **upper** bound for the area of the square as 37.8225 cm^2 .

[2]

Work out Joe's measurement for the side of the square.

Question 2

The number of spectators at the 2010 World Cup match between Argentina and Mexico was 82 000 correct to the nearest thousand.

If each spectator paid 2600 Rand (R) to attend the game, what is the lower bound for the total amount paid?

Write your answer in standard form.

[3]

Question 3

A rectangular photograph measures 23.3 cm by 19.7 cm, each correct to 1 decimal place.
Calculate the lower bound for

(a) the perimeter,

[2]

(b) the area.

[1]

Question 4

Ashraf takes 1500 steps to walk d metres from his home to the station.
Each step is 90 centimetres correct to the nearest 10 cm.

Find the lower bound and the upper bound for d .

[3]

Question 5

When a car wheel turns once, the car travels 120 cm, correct to the nearest centimetre.

[2]

Calculate the lower and upper bounds for the distance travelled by the car when the wheel turns 20 times.

Question 6

The side of a square is 6.3 cm, correct to the nearest millimetre.

The lower bound of the perimeter of the square is u cm and the upper bound of the perimeter is v cm.

Calculate the value of

(a) u ,

[1]

(b) $v - u$.

[1]

Question 7

A rectangle has sides of length 6.1 cm and 8.1 cm correct to 1 decimal place.

Calculate the upper bound for the area of the rectangle as accurately as possible. [2]

Question 8

A rectangle has sides of length 6.1 cm and 8.1 cm correct to 1 decimal place.

Complete the statement about the perimeter of the rectangle. [3]

Question 9

Carmen spends 5 minutes, correct to the nearest minute, preparing one meal.
She spends a total time of T minutes preparing 30 meals.
Between what limits does T lie?

[2]

Question 10

The distance between Singapore and Sydney is 6300 km correct to the nearest 100 km.
A businessman travelled from Singapore to Sydney and then back to Singapore.
He did this six times in a year.
Between what limits is the total distance he travelled?

[2]

Question 11

The length of a road is 380 m, correct to the nearest 10m .
Maria runs along this road at an average speed of 3.9 m/s.
This speed is correct to 1 decimal place.
Calculate the greatest possible time taken by Maria.

[3]