Name	Date

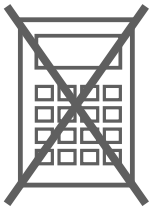
GCSE Mathematics 9-1

Error Intervals and Bounds

(Non-Calculator)

Exam-Style Topic Paper	Total Marks
Time: 50 minutes	**/ 44**

Instructions



- Use black ink or ball-point pen.
- Fill in the boxes at the top of this page with your name and date number.
- Answer all questions.
- Answer the questions in the spaces provided – there may be more space than you need.
- You must show all your working.
- Diagrams are NOT accurately drawn, unless otherwise indicated.
- Calculators may **not** be used.

Information

- The marks for each question are shown in brackets – use this as a guide as to how much time to spend on each question.

Advice

- Read each question carefully before you start to answer it.
- Try to answer every question.
- Check your answers if you have time at the end.

1 The weight of a dog, w, is 15.7 kg, given correct to 1 decimal place.
Write the error interval for w

..... $\leq w <$ .....

[1 mark]

---

2 A number, n, is 0.406, given correct to 3 decimal places.
Write the error interval for n

..... $\leq n <$ .....

[1 mark]

---

3 A number, n, is 750, given correct to 2 significant figures.
Write the error interval for n

..... $\leq n <$ .....

[1 mark]

---

4 A car travels 320 miles, m, given correct to the nearest 10 miles.
Write the error interval for m

..... $\leq m <$ .....

[1 mark]

---

5 A decimal, d, is 6.09, given correct to 2 decimal places.
Write the error interval for d

..... $\leq d <$ .....

[1 mark]

---

6 A mass is 0.004 g, given correct to 1 significant figure.
Write the error interval

..... ≤ mass < .....

[1 mark]

---

7 A height is 1.82 m, given correct to 2 decimal places.
Write the error interval

..... ≤ height < .....

[1 mark]

---

8 A number is 9400, given correct to 2 significant figures.
Write the error interval

..... ≤ number < .....

[1 mark]

---

9 A measurement is 2.35 m, given correct to 2 decimal places.
Write the error interval

..... ≤ measurement < .....

[1 mark]

---

10 A number is 60, given correct to the nearest 10.
Write the error interval

..... ≤ number < .....

[1 mark]

---

11 The length of a rope is 14.2 m, given correct to 1 decimal place.
Write the upper and lower bounds of the length

upper bound .....

lower bound .....

[2 marks]

---

12 A runner's time is 23.4 seconds, given correct to 1 decimal place.
Write the upper and lower bounds of the time

upper bound .....

lower bound .....

[2 marks]

---

13 A plank is 1.25 m, given correct to 2 decimal places.
Write the upper and lower bounds of the length

upper bound .....

lower bound .....

[2 marks]

---

14 A population is 86,000, given correct to 2 significant figures.
Write the error interval

..... ≤ population < .....

[1 mark]

---

15 A number is 0.72, given correct to 2 decimal places.
Write the upper and lower bounds of the number

upper bound .....

lower bound .....

[2 marks]

---

16 A weight is 0.50 kg, given correct to 2 decimal places.
Write the upper and lower bounds of the weight

upper bound .....

lower bound .....

[2 marks]

---

17 A distance is 750 m, given correct to the nearest 50 m.
Write the upper and lower bounds of the distance

upper bound .....

lower bound .....

[2 marks]

---

18 A number, d, is 3.6, given correct to 2 significant figures.
Write the error interval for d

..... $\leq d <$ .....

[1 mark]

---

19 A volume is 52 cm^3, given correct to the nearest cm^3.
Write the upper and lower bounds of the volume

upper bound .....

lower bound .....

[2 marks]

---

20 A speed is 100 km/h, given correct to the nearest 10 km/h.
Write the upper and lower bounds of the speed

upper bound .....

lower bound .....

[2 marks]

---

21 A wheel of cheese weighs 3.6 kg (nearest 0.1 kg).
What is the most it could weigh?

.....

[1 mark]

---

22 A bag of flour is 2.0 kg (nearest 0.1 kg).
What is the least it could weigh?

.....

[1 mark]

---

23 A farmer records 300 cows (nearest 10).
What is the maximum number of cows?

.....

[1 mark]

---

24 A builder cuts a plank of 2.65 m (nearest 0.05 m).
Find the upper and lower bounds of the length

upper bound .....

lower bound .....

[2 marks]

---

25 A train journey is 2 h 30 min (nearest 5 min).
Write the error interval

..... ≤ journey < .....

[1 mark]

---

26 A number x is given correct to the nearest integer. The result is 47.
Write down the error interval for x

..... ≤ x < .....

[1 mark]

---

27 A number x is given correct to 2 decimal places. The result is 3.19.
Write down the error interval for x

..... $\leq x <$ .....

[1 mark]

---

28 A number x is given correct to 1 decimal place. The result is 8.4.
Write down the error interval for x

..... $\leq x <$ .....

[1 mark]

---

29 A number x is given correct to 2 decimal places. The result is 0.76.
Write down the error interval for x

..... $\leq x <$ .....

[1 mark]

---

30 A number x is given correct to 3 significant figures. The result is 0.00452.
Write down the error interval for x

..... $\leq x <$ .....

[1 mark]

---

31 A number x is given correct to 1 significant figure. The result is 70.
Write down the error interval for x

..... $\leq x <$ .....

[1 mark]

---

32 A number x is given correct to the nearest hundred. The result is 3200.
Write down the error interval for x

..... $\leq x <$ .....

[1 mark]

---

33 A number x is given correct to 1 decimal place. The result is 5.1.
Write down the error interval for x

..... $\leq x <$ .....

[1 mark]

---

34 A number x is given correct to 2 significant figures. The result is 0.0023.
Write down the error interval for x

..... $\leq x <$ .....

[1 mark]

---

35 A number x is given correct to 1 decimal place. The result is -4.6.
Write down the error interval for x

..... $\leq x <$ .....

[1 mark]
