

## Exam Practice



Q1. The weight of a dog is 12 kg, correct to the nearest kg. Write down the smallest possible weight of the dog.

Answer: 11.5 kg  
(2 marks)

Q2. The length of a pencil is 15 cm, correct to the nearest cm.

(a) Write down the least possible length of the pencil.

Answer: 14.5 cm  
(2 marks)

(b) Write down the greatest possible length of the pencil.

Answer: 15.5 cm  
(2 marks)



Q3. The height of a church tower is 26 metres, correct to the nearest metre.

(a) Write down the least possible height of the building.

Answer: 25.5m  
(2 marks)

(b) Write down the greatest possible height of the building.

Answer: 26.5m  
(2 marks)

Q4. Paul is asked to provide the error interval for a number  $y$  rounded to 2 decimal places and writes down  $30.435 \leq y < 30.445$ . Write down the actual value of  $y$ .

Answer: 30.44  
(2 marks)



Q5. The time taken to swim across the pool is 14.8 correct to 1 decimal place.

(a) What is the least possible time it takes to swim across the pool.

Answer: 14.75 s  
(2 marks)

(b) What is the greatest possible time it takes to swim across the pool.

Answer: 14.85 s  
(2 marks)

Q6. The weight of an ostrich egg is 0.25 kg correct to 2 decimal places. Write down an error interval for the weight of the egg, giving your answer in grams.

*let  $w$  = weight of egg in grams*

Answer:  $0.245 \leq w < 0.255$   
(2 marks)





Q7. A number  $n$  is rounded to the nearest whole number. The result is 23. Write down the error interval for  $n$ .

Answer:  $22.5 \leq n < 23.5$   
(2 marks)

Q8. A number  $t$  is rounded to 1 decimal place. The result is 8.3. Write down the error interval for  $t$ .

Answer:  $8.25 \leq t < 8.35$   
(2 marks)

Q9. A number  $y$  is rounded to 2 decimal places. The result is 0.78. Write down the error interval for  $y$ .

Answer:  $0.775 \leq y < 0.785$   
(2 marks)



Q10. A number  $w$  is rounded to 3 decimal places. The result is 42.787. Write down the error interval for  $w$ .

Answer:  $42.7865 \leq w < 42.7875$   
(2 marks)

Q11. Eric drives from Abford to Blinton which is 370 km to the nearest 10 km, and then from Blinton to Candale which is 54 km to the nearest km.

Write down an error interval for Eric's entire journey.

$$\begin{array}{l} A \text{ to } B : \quad 365 \leq d < 375 \\ B \text{ to } C : \quad 53.5 \leq d < 54.5 \\ \hline \text{Entire journey :} \quad 418.5 \leq d < 329.5 \end{array}$$

Answer:  $418.5 \leq d < 329.5$   
(3 marks)



Q12. A number  $n$  is rounded to 1 significant figure. The result is 400.  
Write down the error interval for  $n$ .

Answer:  $350 \leq n < 450$   
(2 marks)

Q13. A number  $q$  is rounded to 2 significant figures. The result is 32. Write  
down the error interval for  $q$ .

Answer:  $31.5 \leq q < 32.5$   
(2 marks)



Q14. A number  $r$  is rounded to 3 significant figures. The result is 3.40. Write down the error interval for  $r$ .

Answer:  $3.395 \leq r < 3.405$   
(3 marks)

Q15. A number  $x$  is rounded to 3 decimal places. Write down the error interval for this number in terms of  $x$ .

Answer:  $[x - 0.005, x + 0.005)$   
(2 marks)





Q16. A jeweller is assessing the value of a diamond. She knows that diamonds are currently worth £1700 per 0.2 grams. She weighs the diamond and finds that it measures 0.6 grams to 1 decimal place. What is the least that the diamond could be worth?

- Lowest weight of the diamond could be 0.55 grams
- $0.2g = £1700$   
 $\times 2.75$   $\left( \begin{array}{l} 0.55g = £4675 \\ \times 2.75 \end{array} \right)$

Answer: £4,675  
(3 marks)