

# Limits of Accuracy

Name:	Class:	Date:
-------	--------	-------

Mark	/ 12	%
------	------	---

- 1) The number 98 has been rounded to the nearest whole number. Find its lower and upper bounds. [1]
- 2) The number 92 has been rounded to the nearest integer. Find its lower and upper bounds. [1]
- 3) The number 4000 has been rounded to the nearest 1000. Find its lower and upper bounds. [1]
- 4) The number 95.1 has been rounded to the nearest tenth. Find its lower and upper bounds. [1]
- 5) The number 60 has been rounded to 1 significant figure. Find its lower and upper bounds. [1]
- 6) Find the upper and lower bounds of  $a \times b$ , where  $a = 15$  and  $b = 9$  (both have been rounded to the nearest whole number). [1]
- 7) Find the upper and lower bounds of  $\frac{a}{b}$ , where  $a = 12$  and  $b = 5$  (both have been rounded to the nearest unit). [1]
- 8) Find the upper and lower bounds of  $a + b$ , where  $a = 13$  and  $b = 9$  (both have been rounded to the nearest whole number). [1]

9) Find the upper and lower bounds of  $a - b$ , where  $a = 15$  and  $b = 4$  (both have been rounded to the nearest unit).

[1]

10) The weight of a table is 6 kg, correct to the nearest kg.  
Find the largest possible weight of the table.

[1]

11) The distance between two towns is 800 miles, rounded to the nearest 100 miles.  
Find the minimum possible distance between them.

[1]

12) Chloe drives 5 km (correct to the nearest km) to work, in 15 minutes (correct to the nearest minute).  
Find the least possible average speed.

[1]

### Solutions for the assessment Limits of Accuracy

1)  $97.5 \leq 98 < 98.5$

2)  $91.5 \leq 92 < 92.5$

3)  $3500 \leq 4000 < 4500$

4)  $95.05 \leq 95.1 < 95.15$

5)  $55 \leq 60 < 65$

6)  $123.25 \leq a \times b < 147.25$

7)  $2.091 \leq \frac{a}{b} < 2.778$

8)  $21 \leq a + b < 23$

9)  $10 \leq a - b < 12$

10) 6.5 kg

11) 750 miles

12) 17.4 km/h