**Limits of Accuracy - Advanced**

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| Name : | Class : | Date : |

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| **1)** The number 23 has been rounded to the nearest whole number. Find its lower and upper bounds.       | [1]   |
| **2)** The number 82 has been rounded to the nearest whole number. Find its lower and upper bounds.       | [1]   |
| **3)** The number 9000 has been rounded to the nearest 1000. Find its lower and upper bounds.       | [1]   |
| **4)** The number 79.9 has been rounded to the nearest 1 decimal place. Find its lower and upper bounds.       | [1]   |
| **5)** The number 500 has been rounded to 1 significant figure. Find its lower and upper bounds.       | [1]   |
| **6)** Find the upper and lower bounds of a  $×$ b, where a = 8 and b = 14 (both have been rounded to the nearest integer).       | [1]   |
| **7)** Find the upper and lower bounds of  $\frac{a}{b}$, where a = 9 and b = 8 (both have been rounded to the nearest unit).       | [1]   |
| **8)** Find the upper and lower bounds of a  $+$ b, where a = 12 and b = 13 (both have been rounded to the nearest unit).       | [1]   |
| **9)** Find the upper and lower bounds of a $-$ b, where a = 13 and b = 3 (both have been rounded to the nearest whole number).       | [1]   |
| **10)** The weight of a chair is 12 kg, correct to the nearest kg.Find the largest possible weight of the chair.       | [1]   |
| **11)** The distance between two towns is 4000 miles, rounded to the nearest 1000 miles.Find the minimum possible distance between them.       | [1]   |
| **12)** Christopher drives 6 km (correct to the nearest km) to work, in 18 minutes (correct to the nearest minute). Find the least possible average speed in kilometers per hour.       | [1]   |

**Solutions for the assessment Limits of Accuracy - Advanced**

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| **1)** 22.5  $\leq $ 23  $<$ 23.5 | **2)** 81.5  $\leq $ 82  $<$ 82.5 |
| **3)** 8500  $\leq $ 9000  $<$ 9500 | **4)** 79.85  $\leq $ 79.9  $<$ 79.95 |
| **5)** 450  $\leq $ 500  $<$ 550 | **6)** 101.25  $\leq $ a  $×$ b  $<$ 123.25 |
| **7)** 1  $\leq $  $\frac{a}{b}$  $<$ 1.267 | **8)** 24  $\leq $ a  $+$ b  $<$ 26 |
| **9)** 9  $\leq $ a  $-$ b  $<$ 11 | **10)** 12.5 kg |
| **11)** 3500 miles | **12)** 17.8 km/h |