Test - Units, estimation, rounding and bounds

Year: Year 10 · Duration: 45 minutes · /20

Name:	Date:	**Mark: /20**

Question	1	2	3	4	5	Total
marks	4	4	4	4	4	**20**
Mark						

Show your working.

Question 1 (4 marks)

Question 1 – Conversions

Calculator allowed.

a. Change 3.2 m² into cm². (1 mark)
b. A speed is 72 km/h. Change it to m/s. (2 marks)
c. Change 850 cm³ into litres. (1 mark)

Question 2 (4 marks)

Question 2 – Rounding and estimating

Calculator allowed.

a. Write 0.0357 to 2 significant figures. (1 mark)
b. Estimate $\dfrac{49.6 \times 3.1}{0.52}$ by rounding to 1 significant figure. (2 marks)
c. Is your estimate bigger or smaller than the accurate answer? (1 mark)

Question 3 (4 marks)

Question 3 – Error intervals

Non-calculator.

a. A length is 6.7 cm, rounded to 1 decimal place. Write the error interval. (2 marks)
b. A mass m is 3800 g rounded to 2 significant figures. Write the error interval. (2 marks)

Question 4 (4 marks)

Question 4 – Problem: the garden

A rectangular garden is 12.5 m by 8.4 m. Each measurement is given to 1 decimal place. Calculator allowed.

a. Work out the upper bound of the area. (2 marks)
b. Work out the lower bound of the perimeter. (2 marks)

Question 5 (4 marks)

Question 5 – Higher: bounds

Higher tier. A car travels 200 m (to the nearest 10 m) in 12 s (to the nearest second).

a. Find the upper bound of its speed in m/s to 2 d.p. (2 marks)
b. Find the lower bound of the speed to 2 d.p. (2 marks)