

KS3 – Estimation & Rounding – Answers

Section A – Estimation

Q1

- a) 1,000
- b) 50
- c) 100

Q2

- a) 40
- b) 30
- c) 30

Q3

- a) 100
- b) 500
- c) 20

Q4

About £1,600

Q5

About 9 miles per litre

Q6

- a) Reasonable: $50 \times 20 \approx 1,000$, which is close to 976.08.
- b) Not reasonable: $600 \div 10 \approx 60$, so 4.05 is far too small.
- c) Reasonable: $8 \times 30 \approx 240$, which is close to 255.0.

Section B – Significant Figures

Q7

- a) 50
- b) 700
- c) 6
- d) 0.08

Q8

- a) 580
- b) 7,800
- c) 6.4
- d) 0.048

Q9

- a) 4,760
- b) 85.6
- c) 0.00638
- d) 13.0

Q10

- a) 38,000
- b) 0.0096
- c) 726.5

Q11

- a) 490,000
- b) 487,000

Q12

0.0050

Section C – Error Intervals

Q13

Lower bound = 7.5 cm

Upper bound = 8.5 cm

Q14

Lower bound = 24.55 kg

Upper bound = 24.65 kg

Q15

$345 \leq \text{distance} < 355$

Q16

a) $7.15 \leq \text{length} < 7.25$

b) $475 \leq \text{mass} < 485$

c) $3.445 \leq \text{volume} < 3.455$

Q17

a) 61.5

b) 62.5

c) $61.5 \leq x < 62.5$

Q18

$32.5 \leq \text{time} < 37.5$

Q19

a) 75 m

b) 45 m

c) $3,375 \text{ m}^2$

Q20

106.25 cm^2