GCSE FOUNDATION · REVISION MAT 2

Rounding and error intervals

1 Round 23.751

(a) to 1 decimal place

(b) to 2 significant figures.

2 Round 0.007159 to 3 significant figures.

3 Josh rounds 3.98 to 1 decimal place. Josh writes 3.10

Explain the mistake Josh has made.

4 A mass is 4.6 kg, correct to 1 decimal place.

Leo says the smallest the mass could be is 4.5 kg.

Explain why Leo is wrong.

5 Each box weighs 20 kg, to the nearest kg.

A shelf can hold up to 165 kg.

8 of them are put on the shelf.

Could the shelf be overloaded?
Show how you decide.

6 A rectangle has length 12 cm and width 7 cm, both to the nearest cm.



(a) Write down the error interval for the length.

(b) Work out the smallest possible perimeter.

ANSWERS · REVISION MAT 2

Rounding and error intervals

1 (a) **23.8**

(b) **24**

2 **0.00716**

3 The digit after the last place is 5 or more, so it rounds up and carries over.

3.98 → **4**

4 Half of 0.1 kg is 0.05 kg, so the smallest mass is **4.55 kg**

5 Greatest mass of one = 20.5 kg

8 × 20.5 = 164 kg

No, because even 164 kg is not more than 165 kg.

6 (a) **11.5 ≤ length < 12.5**

(b) 2 × (11.5 + 6.5) = **36 cm**