GCSE HIGHER · REVISION MAT 5

Rounding and error intervals

1 Round 15.8349 to 1 decimal place.

2 Round 0.0008256 to 2 significant figures.

3 $x = 32$, correct to 2 significant figures.

Write down the error interval for x.

4 Estimate the area of a circle with radius 9.8 cm.

Use $\pi \approx 3$.

5 A width is 4.7 m, truncated to 1 d.p.

Ali says the largest possible width is 4.75 m.

Explain why he is wrong.

6 2300 people attend, to the nearest 100.

Each pays £5.

Find the largest possible takings.

7 Explain why 5.0 m and 5.00 m tell you different things.

8 x is 3.2 to 1 d.p. and x^2 is 10.4 to 1 d.p.

Find the error interval for x, to 3 d.p.

Mr&Mrs MATHS

ANSWERS · REVISION MAT 5

Rounding and error intervals

1 15.8

2 0.00083

3 $31.5 \leq x < 32.5$

4 3×10^2

$\approx 300\ \text{cm}^2$

5 Truncation: $4.7 \leq w < 4.8$, so it could be up to (but not) 4.8 m.

6 Most people: 2349

£11 745

7 5.0 is to 1 d.p. (± 0.05); 5.00 is to 2 d.p. (± 0.005), so more accurate.

8 $3.15 \leq x < 3.25$

$\sqrt{10.35} \leq x < \sqrt{10.45}$

$3.217 \leq x < 3.233$

Mr&Mrs MATHS